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"Scire est nescire, nisi id me
Scire alius sciret."

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THE TWENTY-SIXTH LONG FOX MEMORIAL LECTURE:

DELIVERED IN THE UNIVERSITY OF BRISTOL ON TUESDAY, OCTOBER 19th, 1937.

THE VICE-CHANCELLOR (Dr. T. LOVEDAY, M.A., LL.D.) *in the Chair.*

BY

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ON

THE DEBT OF WESTERN MEDICINE TO THE EAST.

LITTLE did I think when I entered the portals of the Royal Infirmary thirty-five years ago that I should have the honour of being invited to deliver a lecture to commemorate the name of Edward Long Fox, a

man of noble character, fully imbued with that spirit of ceaseless inquiry which inspires youth.

It was not my privilege to meet him, but even at this distance of time I seem to sense his personality in the terminal words of his Presidential Address in 1894: "Our highest ambition is to leave each generation better than we found it, and by the influence of our lives to form foundations for our successors to rise still higher; to deserve to have said of each one of us, as it was said of the Great Head of our Profession, 'He went about doing good, healing all that were diseased, for God was with Him.'"

It was because of this earnestness and because he possessed an inquisitive as well as an acquisitive love of knowledge that I thought some apt tribute might be paid and some relevant inspiration gained by transporting your imagination to the Immemorial East, from whence of old the wise men came.

Hitherto it has been the pride and fashion of scholars to ascribe to the ancient Greeks the glory of having first conveyed in their own language the foundations of Medicine, Philosophy and Art; but recent research has shown that the genius of the Greeks drew its sap from Phœnicia and Crete, from Babylon and Egypt, and even still farther afield from Sumeria and the dwellers in the Valley of the Indus. Indeed, it was from the East and not from Egypt that Greece derived her architecture, her medicine, her sculpture, her science, her philosophy, her mathematical knowledge—in a word, her intellectual stimulus.

This is no idle statement; for though the Ebers papyrus carries us back a thousand years before the birth of Christ, it is only within the last fifty years that the scientific world has realized that a high state

of civilization existed in Sumeria and the Indus Valley five thousand years ago.

The discoveries of Evans in Crete, of Sir Leonard Woolley at Ur, and of Sir John Marshall in Mohenjo-daro and Taxilla have illuminated our darkness, and corrected many of our former "certainties."

It has been argued by some that such discoveries are but curiosities demonstrating manual dexterity and the stimulus of environment; but if we believe, as I do, that the history of medicine is the history of civilization, and if we have seen these things as I have seen them, we shall surely agree that the real criterion of their value lies in the extent to which these ancient peoples contributed to human progress, and to that culture which is the heritage of the living world.

Woolley has shown that the earliest graves at Ur, with their wonderful furniture and ornaments of gold and lapis lazuli, are older than the first dynasty of Egypt, four thousand years before Christ, and has stated that the foundation of Egyptian civilization was due to foreign influence; for in Egypt have been found the same cylinder seals, the same architecture, the same vases, the same grotesque animal drawings, the same musical instrument (the sistrum), and above all the same religious mythology as had been familiar to the Sumerians for hundreds, may be thousands, of years.

Nor must it be forgotten that Sumerian arms and Sumerian commerce, under the ægis of Sargon, spread up the valleys of the Tigris and Euphrates, penetrating Syria, Palestine and the Taurus, carrying with them their culture and their codes, the laws of Sumer becoming the code of Babylon, the code of Hammurabi that of Moses, the code of Moses that of Israel and Greece.

Neuburger sums up our knowledge as follows: "Long before the time when Greece first appeared on the horizon of history the Babylonians were able with marvellous exactitude to undertake astronomical observations and calculations. Indeed, the style of writing, the pictorial and sculptural representation, the military tactics and jurisprudence of many nations were directly or indirectly influenced by Mesopotamia."

The code of Hammurabi (2500 B.C.), engraved on Diorite stone, regulated medical and surgical practice. Details of operations and fees are given, but the punishment meted out for unsuccess daunted and discouraged all but the very expert, with the result that surgical progress was inhibited.

Recent discoveries by Dr. Frankfort of a seal of Indian workmanship depicting the elephant, rhinoceros and fish-eating crocodile in Tell Asmar, and by Woolley, of decorated Carnelian beads and steatite vessels exactly resembling those found by Marshall in Mohenjodaro, also point strongly to the fact that so long ago as 3000 B.C. facilities of trade existed between the people of Mesopotamia and the Indus Valley. It is more than likely that the long land route was traversed, but on the other hand it is possible that the sea route was used then, as it is now, by dhows sailing from the western ports of India, hugging the shores of inhospitable Baluchistan before reaching the Persian Gulf or Aden.

In this connection it is not without interest to observe that Sir Aurel Stein has shown that the population of Baluchistan and the Indus Valley was far greater then than it is now, for in that age the climate was good. That the people of the Indus Valley traded with the whole of India, Mesopotamia and

Egypt is certain; for in the ruins of their cities we find jadeite from Central Asia, Amazon stone from the Nilgiris, gold from the Deccan, lapis lazuli and silver from Afghanistan, pearls and precious stones from Ceylon.

In those early days, though the art of writing was known, it is important to bear in mind that lack of suitable writing material made any lengthy compilation a difficult task; but modern study of folk-lore readily explains how experience, practice and learning were conveyed from mouth to mouth by the nomadic clans as they travelled along the great trade routes which stretched from India to Persia, Mesopotamia, Syria and Egypt. Those who have served in Sindh or Persia can readily visualize those long, winding caravans of mules and camels toiling and grunting along, those caravans referred to in the Books of Esther and Ezekiel carrying "ivory and ebony," "cassia and calamus," "broidered work and rich apparel" from India to the West. Is it then difficult to picture the elders of these nomads, halted at the hour of the setting sun by riverside or hamlet, telling and retelling of those wondrous things they have seen and heard? Among these assuredly the prevention and treatment of sickness must have had a foremost place.

This is no fanciful image; for medical evolution among the Chaldeans and Babylonians began some six thousand years ago, whereas among the Greeks and Romans it started some three thousand years later. The papyri of the Egyptians, the clay tablets of the Assyrians, and the Vedas of the Indians represent but an epitome of their medical achievement.

It is true that these demonstrate a sacerdotal and theurgical system of medicine, for they possessed many

gods, good and evil, male and female, causing or curing disease, the ancients believing that the gods rewarded or punished man for his various acts, reward being in the form of good health and success, punishment in the form of sickness or failure.

The practitioner of medicine, whether priest or layman, was always a man of good family and education. Doubtless superstition and custom marred the palatability of his simples, but ample record exists of the variety of drugs that were in common use for everyday disorders. We read of alum, antimony, arsenic, cantharides, copper, myrrh, turpentine, mercury, iron, zinc, sulphur and fish-liver oil being employed for diseases of the eye and skin. Nor must we forget that by long observance the ancients arrived at deductions of astounding empirical value. Many of these were handed down from generation to generation. Some were observed by the Israelites, as close study of the Old Testament will show ; but perhaps the most astonishing, apart from the subject of personal hygiene and preventive medicine, is the law decreeing that man and wife shall live apart until the seventh day after the catamenial period has ceased if the people would multiply as the sands of the seashore. This empirical edict, based upon rabbinical observation, anticipates by four thousand years the recent discovery that ovulation does not occur before the thirteenth day, and perhaps also accounts for the well-authenticated fact that the orthodox Jewess does not suffer from cancer of the cervix uteri.

The Old Testament, mostly dating from eighteen hundred to five hundred years before Christ, has many references which demonstrate astute clinical observation and training. For instance, we read in Genesis xxxviii. 27 of spontaneous evolution with live

uniovular twins and a ruptured amniotic sac. The treatment practised is classical and has not altered since. The condition described is very rare, only forty-four cases being on record. It was first mentioned in our medical literature by Viardel in the seventeenth century, who stated that when twins are of the same sex they are enclosed in a single amnion, whereas when they are of different sexes the Almighty encloses them in separate sacs with a view, shall we say, to guarding their morals *in utero!* Then again we have recognized the extreme dangers of uterine inertia in 2 Kings xix. 3 and in Jeremiah xv. 19, together with the fatality associated with precipitate labour and inversion or postpartum hæmorrhage in 1 Samuel iv. 19. I hope some of you will refer to these passages. But perhaps most wonderful of all is the graphic description (far antedating Hippocrates) of puerperal or pelvic peritonitis in Numbers v. 21–27.

Obstructed midwifery has little or no mention, but that is what one would perhaps expect in a nomad people living a healthy life and feeding on a full vitamin diet. The words "the obstetric hand shall bring forth the winding serpent," in Job xxvi. 13, would, however, seem to hint at version or manual removal of the placenta.

Remember always that the treatment of disease in Biblical times was not *only* by prayer and sacrifice, for dietetic measures and medicaments were used, including healing springs and oil baths. Oil, wine and balsam were employed in dressing wounds, and bandages were applied to broken limbs. Midwives were obviously esteemed, for we read that "the Lord dealt well with the midwives and built them houses."

Though the priests or Levites were health officers,

it is wrong to suppose that no professional physicians existed ; for wherever there is mention of healing there is no reference to priests, but rather to the " Rophe " or physician. It will be recalled that Jeremiah held it as inconceivable that there should be no physicians in Gilead, and of course the testimony of Ecclesiasticus xxxviii. stands for all times.

The Talmud gives much useful information, and shows considerable knowledge of the dura and arachnoid membranes. The preparation of food from slaughtered animals gave the Jews insight into the pathology of diseases of the liver, lung, kidneys, etc. Moreover, we read that trephining, amputation and venesection were regularly performed.

It would be indeed erroneous to minimise the medical achievements of the Babylonians and Israelites twenty to thirty centuries before Christ merely because we possess no doctrinal evidence. Admittedly magic, astrology and divination befog the written word, but there can be no question that the practice of embalming, together with clinical observation, advanced the knowledge of anatomy, physiology and surgery, so that succeeding generations of Greeks and Romans could build upon it, assisted by speculative philosophy and deductive observation. Should such a statement be challenged one has only to contemplate that masterpiece of Assyrian art, the dying lioness from the palace of Assurbanipal which is in the British Museum. The wounded beast, her spine severed by an arrow, turns snarling on the hunters, dragging her paralysed limbs. Such a conception could only be depicted by an artist fully acquainted with the physiological effects of spinal injuries.

It is not possible to date the dawn of Indian civilization, but it is probable that the Aryan race,

fair in complexion and enterprising in character, originated in the high tableland eastward of the Caspian Sea. That they possessed a co-ordinate system of government and a religion abounding in moral precepts is certain. As their numbers increased and expansion became necessary one branch spread westwards towards Persia and the Caucasus, the other spread south-eastwards, invading and settling in a country called Aryavarta (the land of the Aryans), which lay east of the River Sindha, the western boundary of India. The letters H and S are convertible in Zend, the ancient Persian language, and so the name of the River Sindha explains the title given by those who first passed its boundaries—the Hindus.

The Book of Kings in our Old Testament speaks of the wisdom of a people who inhabited the east of Asia, and in Genesis xxxvii. 25 we read of the products which were in demand from them. Moreover, we are told that Terah, the father of Abraham, who lived about 1800 B.C., "dwelt on the other side of the flood and served other gods," the flood, of course, denoting the great Euphrates River.

The Aryan race, possessing both an alphabet and grammar, were the founders of Sanskrit, the purest and most perfect of all languages, from which Zend, Armenian, Greek, Latin, German and Celtic derive their basic origin.

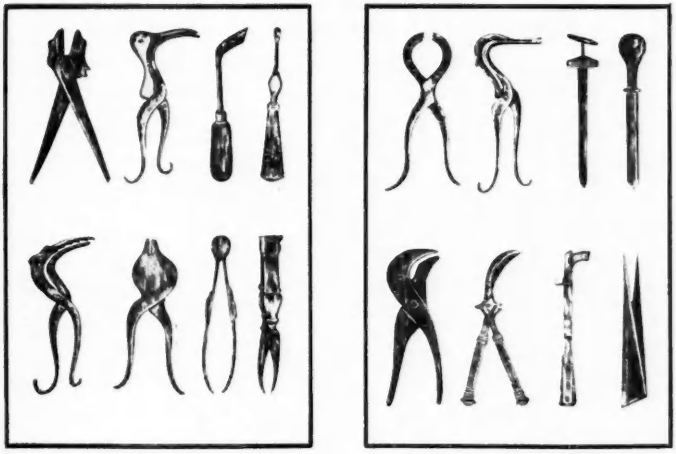
At this point it is not without interest, perhaps, to observe that all the early religions, those of Brahma, the Buddha, Confucius, Mahomet and Christ, together with almost all early civilizations, such as those of Sumeria, Northern India, Babylon, Egypt, Crete and Greece, flourished round about the thirty-fifth degree of latitude; that is to say, where the resources of

nature were most abundant and the climate not too enervating.

It has been supposed by some that China can claim priority in knowledge of the arts and sciences owing to the remarkable and enduring character of their civilization, but although there was intimate intercourse with India by means of travellers, ambassadors and Buddhist priests, it is now held that the science of medicine was not introduced into China before the Christian era, for reverence of the dead and ancestor worship forbade dissection. The only medical debt we consciously owe to the Chinese is gold and silver acupuncture, which was immemorial treatment for every ill; though it would be churlish not to admit that they first discovered the art of making paper, an art that later made the intellectual revival of Europe possible.

It is from the Vedas, through the mists of mythology and fogs of superstition, that fifteen hundred years before Christ we can discern the realities of existence in ancient Hindustan. Legend has it that the great god Brahma wrote the Vedas for the guidance of the universe, and that the greatest of these was the Atharva Veda. Subsequently, taking compassion upon sick and suffering man, Brahma produced the Ayur Veda, which is the first great treatise on the Science of Life. Dhanwantari, the father of medicine, was then created to minister to the diseases of mankind, and just as the sages came in later centuries to Hippocrates, so in those early days deputations were sent to Dhanwantari for instruction. The story runs that on their arrival the master asked his pupils, "On what shall I lecture?" and they answered, "On surgery, because among the gods there are no diseases, whereas wounds and injuries are the common lot of gods and

Ancient Hindu Surgical Instruments.



Wolf Skull Forceps | Curlew Ear Forceps | Cleft Palate Knife | Ancient Hindu Cataract Knife

Crocodile Bone Forceps | Tiger Bone Forceps | Ancient Hindu Long Toothed Forceps

Lion Bone Forceps | Ancient Hindu Ear Forceps | Ancient Hindu Trocars and Cannulae

Ancient Hindu Bone Forceps | Ancient Hindu Cautery

Dhanwantari, the Vedic Father of Medicine, holding the Bowl of Amrita or Water of Immortality.

UNIV. OF MICH.

men." This reply, so like the story in Homer of Achilles and Machaon, is not without interest, for even to-day many incline to look upon disease in mankind as a retribution for sin.

Susruta and Charaka were among the first disciples of the master, and though some are of the opinion that their Sanskrit compilations belong to the Christian era, it is far more probable that they are pre-Hippocratian, for their elaborate ethical code, written in ancient and purest Sanskrit, was founded on the Laws of Manu, and is purely Brahmanical. These laws date back to 900 B.C. Moreover, a study of their copious Materia Medica reveals the fact that there is not a single mention of any substance of foreign source, whereas the writings of Hippocrates give ample evidence that many Indian plants, whose properties were well known, were imported into Greece.

The Hippocratic oath leads one to the same conclusion, for when it interdicts the performance of lithotomy, except by men who were special practitioners of this operation, it surely suggests that the author's knowledge of anatomy and surgery had been derived from a more enlightened nation, and was imperfect compared with that of his teachers. Moreover, seeing that Hippocrates visited Smyrna, Libya and Scythia, is it not probable that he visited this latter distant and inhospitable northern country because he had heard of the surgical feats performed by an enlightened people ?

Dim dates are difficult to be sure of, but at least we know that at the time of India's invasion by Alexander the Great the conqueror enlisted the services of local practitioners, whose wisdom was as proverbial then as it was in the later days of Galen,

Pliny and Dioscorides, who frequently when wishing to imply excellence or wisdom use the words *Indi dixerunt.*

Susruta taught that the foundation of surgery was anatomy, and made his pupils do dissections. In those days there was no Brahmin ban against touching a corpse, for the Laws of Manu state that " mere bathing will purify after touching a dead body, while to stroke a cow or gaze at the sun if the mouth be sprinkled with water will remove defilement."

Thus began the golden age of Hindu surgery. To Susruta we owe the discovery of cataract-couching, skin-grafting and rhinoplasty. From him we possess a precise knowledge of midwifery and learn the positions occupied by the fœtus *in utero.* He states that the expectant mother must be kept in a happy frame of mind and in placid surroundings if her labour is to be easy. He speaks of post-mortem Cæsarean section. He writes of amputations and the necessity of artificial limbs made of iron. Tumours are removed, ruptures reduced and patients cut for stone. Still more remarkable, rules are laid down for the operating-room, for it is written that it should be fumigated with sweet vapours, the surgeon is to keep his hair and beard short, his nails clean and wear a sweet-smelling dress. It is not certain what drug was used, but directions are given that the patient was to inhale a substance called *sammohini* before operation. Over a hundred steel instruments are depicted and their use described. Many of these have their counterparts in the catalogues of every modern firm supplying the needs of the general surgeon.

Reference having been made to the fact that Cæsarean section is mentioned by Susruta, perhaps a digression may be permitted in order to show that this

operation is of great antiquity, indeed dating back to the Iliad of Homer; for the legend runs that Coronis, mother of the unborn Aesculapius, was killed by Artemis for her infidelity. When Apollo, the father of her child, saw Coronis on the funeral pyre, he cut the boy from his mother's womb and carried him to the cave of the wise centaur Chiron, where he was instructed in the cure of all disease.

Ovid, *Metamorphoses* ii. 630, obviously refers to this belief in the lines:—

> "Natum flammis uteroque parentis
> Eripuit geminique telit Chironis in antrum."

And, of course, we have the evidence of Shakespeare that the operation was well known in his day, for apart from the reference in *Macbeth* to "Macduff who was from his mother's womb untimely ripped" we have the metaphor in *King John*, V. iii., indicating that his audience was well acquainted with the operation:—

> "You bloody Neros, ripping up the womb,
> of your dear Mother England, blush for shame."

There can be no question that the practice of Cæsarean section dates back to the Vedas, for to-day, as from times immemorial, the Hindu is forbidden to burn the body of a pregnant woman who dies before the birth of the child without first excising the fœtus.

Needless to say such evisceration must have taught the elements of anatomy; for the most frequent cause of premature death in the case of a pregnant woman in the Tropics must have been the same then as now, namely either enormous enlargement of the spleen and liver inhibiting

progressive ascent of the uterus or obstruction in the pelvis preventing delivery.

Charaka flourished about 400 B.C. and wrote eight books. He describes fevers, leprosy, mania, epilepsy, and nearly every disease we meet with in common practice to-day. The seventh book details four hundred purgatives alone and their various uses. He classifies food and diet according to disease, and tries, like Freud, to analyse the secret of dreams. He writes of the benefit of steam baths and of stramonium cigarette smoking for asthma. He advocates nux vomica for paralysis and dyspepsia. There is an interesting section on climatology, where patients, according to their sufferings, are urged to sojourn in such climates as are suitable to them. The ritual of oral cleanliness is looked upon as of the first importance, and although toothbrushes did not come into use in Europe until about A.D. 1700, it is remarkable to read the rules laid down by Charaka for the selection and use of twelve distinct types of toothbrush and tooth powder.

He tells us that the practitioner who knows the value of quicksilver and the metals is a god, he who knows the qualities of herbs and roots is a man, he who knows the use of the knife or fire resembles a devil, but he who knows the proper prayers to be offered up in the time of sickness is a prophet.

The mention of the metals is of significance, for the ancient Hindu race were the first to employ mineral drugs internally. Their chemical skill was remarkable. They knew how to prepare sulphuric, nitric and hydrochloric acid. Gold, mercury, silver, copper, lead, tin, zinc, iron, arsenic and antimony are all described, and their uses, either in pure form or as salts, are indicated. For instance, it is illuminating to read that

if sixteen parts of gold and one of lead be mixed with lemon juice and then rubbed together and heated, or if gold be mixed with sulphur and aloes and exposed to the fire twelve times until it is reduced to a powder, either mixture is valuable for chronic diseases of the spleen and lung. Or, again, it is instructive to read of the preparation of the yellow sulphurate of arsenic, which was used for leprosy, skin diseases, mania and fevers.

It would take too long to recount the way they prescribed their medicines in pill, extract, infusion or ointment form, with rules which varied according to the temper, age, constitution and disease of the patient, but historically it is perhaps not without interest to see that medicines were divided into classes, one which increased strength by evacuating bad humours from the body, such as purgatives and emetics, and the other which lowered the exalted action of the humours and restored them to a healthy state. For instance, thirty-nine simple drugs are enumerated for curing diseased wind, twenty-three for curing diseased phlegm and twenty for deranged bile. In those days rubbing with oil to relax all tissues of the body was an essential feature of treatment before any drugs were exhibited.

In parenthesis and lighter mood it may not be without interest to the gentler sex to relate that the art of dyeing the hair, the fashion of lipstick and eye pencilling, the mode of varnishing the finger and toe nails, together with the music of the bagpipes, all originated in Sumeria and the north-west corner of India some five thousand years ago—imperishable legacies to many.

If such was the wisdom of Aryan India (and I have but given you a passing glimpse of it), what was

the reason of its decay ? History tells us that it was the rise of pure Brahmanism with the desire of the priests to maintain all power in their own hands. For it must be remembered that the Brahmins, with their subcaste the Vaidyas, considered themselves persons of divine origin, whose duty it was to perform rites of religion and instruct mankind in the path of learning and duty. They alone had access to the Shastra, and so became learned pundits and skilful physicians.

The priestly office, like that of the ancient Druids, was the road to distinction and power. In the beginning they attained pre-eminence by cultivation of the mind and the practice of virtue, but with power came degeneracy. The despotism of caste, forbidding liberty of thought, laid down rules which subjected a whole continent ; for we see that in order to curtail the growing influence of the surgeon they not only prohibited all shedding of blood, but ruled that all who took from or were touched by a surgeon became unclean, and to enhance their own majesty they introduced the treatment of all diseases by *mantras*, incantations and amulets.

The rise of Buddhism and its rapid spread throughout the Far East still further inhibited surgical progress for hundreds of years, for the teaching of the Buddha prohibited the use of the knife and any form of dissection.

One must, however, be fair to the Buddhists, for to them India and the whole world owes a great debt from a sanitary, medical and veterinary point of view. They first established a system of state medicine, one physician being appointed for every ten villages on the great roads of India. They laid down laws regulating burial and sanitation. They

prohibited adulteration of food. They established botanical gardens for the special supply of herbs and drugs for medical use. They built bird and animal sanctuaries and even animal hospitals with a reverence worthy of St. Francis of Assisi. Indeed, our debt to the followers of the Buddha is but little appreciated, and I would wish to offer them a professional salute.

It is not easy for the Western mind to enter into that spirit of Buddhist or Hindu philosophy, which deprecates action, for, as Carlyle has said, "the end of man is an action and not a thought, though it were the noblest."

The Yogi who practises Yoga with the object of uniting his soul with the divine spirit is highly interesting as an example of the attitude of the Indian mind towards life. His world-weariness causes him to fly from the struggle and pleasures of life to the solitude of the jungle, in order to seek an escape from the activity even of thought itself.

It may be that a philosophy of quietism was natural to the indolence and enervation of Indian life, but such a doctrine was a direct incentive to warlike and materialistic neighbours to harass and invade the country; and so we find that all the learning of centuries subsided, was lost or forgotten in the tides of war and invasion which swept again and again over India from the beginning of the Christian era.

Is it then surprising that the clocks of medicine and of surgery stood still, and that Europeans visiting Hindustan at the time of Shah Jehan marvelled at the lack of any surgical skill? Their wonder is perhaps not so remarkable when one considers that the doctrine of Karma held two hundred million

people, a doctrine that taught that "I am what I am because of my past deeds, I shall be what I shall be because of my present deeds."

So far it has been my object to portray the intellectual vigour of the primitive eastern branch of Aryans, to whom we owe so much in medicine, law, art and philosophy. It is not my intention to dwell upon that later western branch which built up the Grecian and Roman systems of medicine from the time of Pythagoras till the second century A.D. During this period men of genius conferred glory on their country and imperishable renown upon themselves. Greece became the seat of philosophy, and Greeks the nursemaids of the arts handed down to them by earlier eastern civilizations. But as in India so too in Greece, the clock of progress was stopped by the invasion of rude and hardy races from the north, who destroyed what was most noble and beautiful with relentless barbarism, preserving only what harmonized with their rude manners or administered to their sensual pleasures. Thus persecuted, Europe remained for many centuries in a state of lethargy, the pendulum of learning swinging back again towards Egypt and Syria.

It is to the Caliphs of Baghdad that we owe an imperishable debt. They patronized learning and instigated the translation into Arabic of the most important medical authors, particularly those of Hippocrates, Dioscorides, Galen and Paul of Aegina. This inheritance of Grecian thought awakened the dormant intelligence of the Arabs and sharpened their critical faculties. The Nestorian school at Jondisabur was the cradle of Arabic medicine. From it came wise men who gave the impetus to translation and scientific research which lasted for centuries. To fulfil this

statement it is only necessary to mention three great names, Rhazes, Ali Abbas and Avicenna.

Rhazes was born in 850 A.D. He was guided by the principles of Hippocrates, basing his opinions upon observation and laying stress upon hygienic and dietetic measures. He has acquired lasting fame chiefly for his vivid description of smallpox and measles.

Ali Abbas realized that the chief task of the physician was to prevent disease. He was a pioneer in recommending that young physicians should frequent the mental and other hospitals which were first inaugurated by and were the glory of Arabic civilization from Baghdad to Alexandria and from Cairo to Cordova.

Avicenna, who wrote the *Canon of Medicine*, stands out as a monumental figure from the tenth to the fifteenth century. He was a statesman, physician, astronomer, teacher and author. His great work is a landmark, for it stands as an epitome of all precedent development, the final codification of all Græco-Arabic medicine.

For nearly a thousand years Arabic physicians were the teachers of the West, throwing open to the Christians of Europe the portals of scientific medicine and granting to them the privilege of access to the intellectual treasures of antiquity, a privilege of surpassing importance which compels recognition.

With the Renaissance individuals and nations vied with each other in honouring the pursuit of learning. The study of medicine exercised the genius of great men, who constructed it upon a basis of anatomy and physiology, observation and reasoning, not a little assisted by the genius of Leonardo da Vinci, who uplifted the science of descriptive and

pictorial anatomy to a height which has never been equalled.

Coming to more modern times, it is very easy to see and appreciate the debt of the West to the East, for civilization, commerce, transport, peace and war, owe an imperishable debt to scientists working under conditions of danger and stress.

If the apothegm of Blaise Pascal, "Had the nose of Cleopatra been shorter, the whole face of the earth would have been changed," be accepted, how much more truly could it be written, "Had the cause and treatment of malaria been known, to what heights would not Greek and Roman culture have reached."

History teaches us that Hippocrates recognized the periodicity of malaria and relapsing fever, for he describes the jaundice, the enlarged spleen and liability to abortion; but it was the tide and pride of wars, with overcrowding of populations in infected areas, that spelt the ultimate decay of Greece and Rome.

The story of Ronald Ross working in Calcutta before the days of modern comforts and modern scientific implements is a romance in itself. It is quite impossible to estimate the benefits that his discoveries and those of Manson have conferred upon mankind—discoveries that have made possible the development of all tropical countries, and which have reduced the death-rate of immigrants and indigenous people in those countries to that of London.

Similarly peace and war have demonstrated the debt we owe to the experimental research of Shiga and Leonard Rogers on the treatment of dysentery and cholera; to the work of Obermeyer, Todd and Mackie on the transmission of relapsing fever; to the discoveries by the Japanese investigators Inada and Ido of the leptospiræ which cause Weil's disease;

to the researches of British, Dutch, German and Indian workers on the causation of beri-beri and epidemic dropsy; to the work of McCarrison on goitre and nutrition; to the finding by Bilharz of the parasite which, since time immemorial, has been the cause of colossal mortality and invalidism; to the investigations of Scott, Fairley and Mackie on the ætiology of sprue, that disease which so often in former days was fatal; to the work of Leishman and Donovan upon kala azar; and to the elucidation of that crippling disease osteomalacia by Maxwell, Stapleton and others. It is not necessary to prolong the list, for these are but a few of the diseases which every European practitioner may meet with in these days of rapid transit and moving populations.

Horace tells us that as we grow older we become *mitior et melior;* therefore, before closing, I should like to touch upon a somewhat sombre side of our debt, one that has a bearing upon the future. Hitherto I have endeavoured to demonstrate what we owe to the East, and have tried to illustrate how, in this century at least, we have repaid some of that debt in the currency of preventive medicine. But from that currency an imponderable problem is arising, namely that of food production and supply, for a rapidly increasing eastern population with a rapidly decreasing death-rate. The burden that preventive medicine has thrown upon the East is an immense one. It is a challenge, for starvation and ultimate decay must occur if food production is inadequate in those countries. It is for us to devise a plan lest the debt of eastern medicine to the West be repaid by lamentation.

That science will solve the problem, too, we need not doubt. The productivity of Mother Earth is so

great that even in a crowded Europe and America millions of tons of fresh foodstuffs are destroyed deliberately every year for purely economic reasons. "Poverty amid Plenty" is a commonplace all the world over. But it is a problem which we must solve quickly, especially in the East. If we can solve it, maybe our debt to those "Wise Men of the East" of whom I have been speaking will be *at last* repaid in full.

CHILD GUIDANCE.*

BY

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THE term Child Guidance has only been in use for some fifteen years, and was originally coined in the United States. It is particularly appropriate, as the word "guidance" stresses the preventive side of the work. Actually, child guidance forms one part of the bigger subject of psychological medicine; just as pediatrics is the children's department of general medicine, so child guidance is the children's department of psychological medicine. The children seen at a child guidance clinic are those with psychological problems—the difficult and the nervous children, the "naughty" or "high-strung"—that is, children whose behaviour is causing anxiety to their parents or teachers, and who seem unable to fit in to their environment.

You may hesitate, perhaps, at the suggestion that the sphere of medicine should be enlarged to include such problems as stealing, truancy and the like. These, you may feel, are more in the province of the parson or the teacher than in that of the general practitioner, unless there is some very definite underlying organic pathology such as is found in the brain of the general paralytic or post-encephalitic.

* A paper read before the Society on Wednesday, October 13th, 1937,

Perhaps for one moment it may be worth turning aside to look at certain general concepts underlying the whole of psychological medicine. Not so long ago the tendency was to think of Body and Mind as two separate entities and those who were interested in philosophy pondered upon the possibility of interaction between the two. The mind controlled the body and sick minds were only the physician's concern when a person became completely irrational or so anti-social that for the protection of the majority his liberty had to be taken away from him. As far as morals were concerned a "moral faculty" was postulated, and certain people were considered to be born without it or to have it in an underdeveloped form and such people could be certified as moral imbeciles. These concepts have served their time and are being gradually replaced by holistic theories in which the person is considered as an entity in himself. The individual is more than the mere sum of his parts, he has potentialities greater than those of his organs separately considered, just as an assembled motor-car has properties and functions which are not possessed by the mere collection of the component parts as they lie on the stock-room shelves. A person is an integrated unit—a whole—and functions as such. This we fully realize in everyday life when we say certain actions could only have been done by a certain person, they bear his hall-mark, just as a painting bears witness to the personality of the artist in every stroke of the brush. But it is not my intention to discuss the pros and cons of such theories from the philosophic point of view, but rather to stress the need of such common sense theories when it comes to dealing with many of the practical problems of medicine.

We need not believe in interactionism; but our

clinical findings when a person has had a fright include dilated pupils, tachycardia and other signs of sympathetic action. Pavlov's experimental work with dogs has only proved what has been known to physicians for centuries, namely, that a person's digestion is affected by his emotional state. The exact form of a person's fears or worries tends to be the result of his previous experiences, but fear in everyone is accompanied by changes in the vegetative nervous system. A person in a panic has a characteristic blood sugar curve. This is a physical change accompanying a mental state, and when such states recur frequently structural organic changes may occur. It is far from clear exactly how these changes are produced, but the recent advances in endocrinology and biochemistry are beginning to throw light on some of these processes. The essential point, however, is that one cannot expect to find a normal physiology if there is an abnormal psychological state. Our medical findings have to be assessed in the setting of the patient's personality, while on the other hand his behaviour has to be considered as the result not only of the person's previous personality, but also of his present physical state. A person's indigestion may be the result of business worries, while his careless driving may be evidence of his physical fatigue. Medicine has to deal with individuals—with people whose ambitions and fears affect their digestion and whose dyspepsia may be a deciding factor in the history of the world. It is necessary to make this broad approach clear, otherwise some of what follows might seem to be outside the scope of general medicine.

Returning to child guidance, the children seen at the clinic fall roughly into four main groups. First, the aggressive and uncontrollable children who are

referred for such reasons as "stealing," "wilful damage," "irresponsible." Second, the more introverted type sent because they are sensitive and high-strung, "slow and awkward," "solitary," "lacking in initiative." Third, those who are in difficulties at school, "backward," "lacking in concentration" or those to whom has been applied the old tag "could do better if he tried." Fourth, those where the emotional strain is shown by unusual physiological behaviour such as tics, stammer, enuresis and hyperkinesis—the latter often referred as "St. Vitus's Dance."

The aggressive children tend to predominate, as their behaviour is more likely to give rise to concern to those in authority. The submissive and fearful child is overlooked, as he does not usually worry his parents or teachers to the same extent. These latter are, however, in many ways the more serious problem, as it is from their ranks that so many of the adult neurotics are recruited at a later age. The types of children referred indicate one of the difficulties of child guidance. The referrals* are based not on the actual importance of the problem, but on what the *adults think* is the importance of the problem, Behaviour which in one family would be barely remarked on is in another the topic of much discussion and concern. Referrals are thus to a certain extent an indication of the community's awareness of children's real needs.

In order therefore to assess any given case one has to investigate not only the child but also his environment. We all realize the importance of environment; we ourselves know that when we are with one set of

* Referral = act of referring (*Webster's New International Dictionary*, 1934), in this context it implies patients referred for examination.

people we feel encouraged to put forth of our best, while with others we feel their critical attitude long before any actual comment is made. An adult, moreover, can to a greater or lesser extent choose his own environment, but the child has usually to accept the surroundings in which he finds himself.

The aim of child guidance is to study a child and not a problem and to study that child in his actual setting, any particular problem being regarded as the outcome of the reaction between the child and his environment. In order to carry out such a study efficiently it has been found useful to have a team of three specially trained workers: the doctor, who should have had experience in both adult and child psychopathology; the psychologist, a lay worker and usually a teacher, who estimates the intelligence and educational achievements of the child; the social worker, who deals with the home surroundings, visits the schools and investigates the environmental side of the problem.

Perhaps it would make the procedure clearer if I explained exactly what happens when a child is referred to the clinic. Children are seen only by appointment, so that there is the minimum of waiting for parents and children. Usually the doctor sees the mother first, when she is asked to state the problem as she sees it and to give the relevant details of the child's past history, including such facts as the dates of walking, talking and of acquiring clean habits; inquiry is also made with regard to previous health, adjustment at school, relationship with other members of the family and previous personality. With this outline the social worker then carries on the interview with the mother, paying particular attention to economic difficulties and emotional strain in the home, while the

doctor, in another room, is seeing the child. A great deal can be learned from the way the child reacts to the "clinic situation." In the doctor's room there is a large toy cupboard and a blackboard along one wall. Here the child is encouraged to make himself at home, with varying results. Some are shy and timid, others inquisitive. One will sit restlessly twisting her handkerchief, another will at once launch into a long account of her home. One takes a few toys from the shelves and plays constructively, while another is not content until everything is emptied on to the floor. The room and toys are the same for each child, so that the variations in behaviour are the result of the children's differing personalities and may illustrate vividly the problem. Usually it is possible to carry out the physical examination at the first interview, but if it is felt that this will seriously interfere with the child's rapport with the clinic, then it is postponed till a later occasion. The physical examination is a necessary part of the complete investigation, as not infrequently there are physical factors which are influencing the child's psychological attitudes. Special attention is paid to eyesight, speech defects, deafness, evidence of adenoids, left-handedness and chronic infections, any of which may hinder a child's development. The present physical state of the child has to form the basis of future treatment. A few child guidance problems are the direct result of physical conditions, possibly a slightly larger number are secondary to necessary restrictions imposed in order to safeguard the child's health, but a very large number are the outcome of misinterpreted medical instructions. For example, there is the child with an umbilical hernia whose mother was told that "on no account was she to let the child cry," and who faithfully carried out

these instructions for two years, with the result that the child is completely spoiled and has merely to threaten to cry in order to get his own way; then there is the parent who knows that his child has a cardiac murmur, and who is afraid to let him play in the street or climb trees even though he has been passed fit for all games and swimming. In these and similar cases an accurate knowledge of what forms of activity may be prejudicial to health is the first step towards drawing up a constructive plan for the future.

The child returns a week later for a psychological examination. He first has a test to estimate his intelligence. This is usually one of the revisions of the original Binet-Simon tests. These tests are obtained in the following way: several thousand children are given a series of things to do, from this is worked out what the average child of any age can do; if another child is then given the same things to do one can compare his results with this previously ascertained standard and say that he is able to do the work that is usually done by, for instance, a seven-year-old child, that is he has a mental age of seven years. Every child has a mental age, and it need have no close correlation with his chronological age. A child who is seven years old may have a mental age of only a few months but might have one of twelve years. The mental age appears to depend on an inborn constitutional factor, and not to be the result of the educational opportunities that the child has had. Further, the ratio of mental age to chronological age (often called the Intelligence Quotient) does not vary greatly throughout life, and it is therefore possible to say at the age of six or seven years, for example, that a boy or girl has a superior intelligence and will probably

benefit from a university education, while it is equally possible to say that a child is "dull normal" and it is pointless for him to try for a scholarship to a secondary school. This innate factor of intelligence is now recognized by the educational authorities, and they are gradually re-organizing their schools so that children can be graded according to their mental age and not according to their chronological age.

After the mental age has been assessed a child is given educational tests, usually confined to reading and mental arithmetic. These tests also are standardized according to age. The educational attainments of a child should correspond to his mental age; that is, if a child has a mental age of ten years then he should be able to read the words and do the sums that are commonly done by a ten-year-old child. The mental age of a child might be likened to the R.A.C. rating of a car, that is its theoretical capacity: the educational attainments would then correspond to the brake-horse-power or actual output.

If a child's school work is below his mental age then he "could do better." Such a child is called "educationally retarded" and will benefit from coaching. The causes of retardation are many, and include absence from or irregular attendance at school, frequent changes of school with different teachers and new methods, or physical handicaps such as deafness, left-handedness or stammering; and finally there may be emotional barriers which inhibit his learning. In contrast to the "retarded" child is the "dull" child whose school work is up to the level of his mental age, but the latter is eighteen months or more below his chronological age. Such a child appears retarded if his class is graded according to chronological age, but not if according to mental age. When a child is asked

to do work above his mental age he tends to show the strain by increased irritability, restless sleep or other evidence of emotional tension. A child's intelligence functions most efficiently when the work he is doing corresponds with his innate ability: a dull child among intelligent children is being subjected to too great a strain, while the bright child in a class of normal children is not usually extended to his full capacity.

In addition to the educational and intelligence tests a child is usually given some performance tests. School work involves an almost continual use of words, and therefore any child who is not good with words is at a disadvantage. A performance test indicates those who are better at doing practical things. Practical and arithmetical ability often go together. It is common for a child who is fluent with words, and therefore capable of expressing him or herself freely, to be given the credit of a better intelligence than is actually the case, while the slower, more practically-minded child, usually has his intelligence under-estimated.

As has been mentioned earlier, children are integrated individuals, and problems in one sphere of life tend to have repercussions in others. The child who cannot get on at school will be an unhappy child at home, every minor illness will be made the most of if it means that he is excused school. A headache which at breakfast will barely allow a boy to lift his head can disappear in ten minutes once he knows he need not go to school. Many children learn at an early age that no attention is paid to such remarks as "I can't do sums," but if they say: "I feel too ill to go to school" then at once their parents are sympathetic. When a girl talks about school in her sleep, or when

there is a close correlation between abnormal behaviour and attendance at school, then the school situation will probably merit investigation. Truancy is nearly always the result of the child's inability to do the work and only occasionally is it sheer devilment. If a boy has tried and tried again, and if his genuine efforts are not recognized as such, then rather than face what are to him unfair rows he stays away. The problem of adjustment at school is an important one, for if the child is retarded, and if the behaviour, be it in the form of exaggerated somatic complaints or truancy, is treated by exclusion from school, then the total situation is only in the long run made worse—the child, although perhaps better while at home, loses more time and on return to school is more retarded than before.

The child's physique and intelligence having been investigated and his behaviour in the clinic observed, it is then necessary to consider the different factors in the environment. When attention was first paid to the problems of children it was thought that there would be a close correlation between bad behaviour and poor social circumstances, but this was not found to be the case. Poverty is seldom a major cause of behaviour problems ; it does, however, tend to play an important secondary part, as the child who is emotionally dissatisfied has fewer outlets if his home is poor, while the boy who has plenty of possessions is more likely to find compensatory satisfactions than the one who has no toys. Outbursts of temper in a two-roomed flat may provoke more retaliation than in a big house, where it is possible to isolate the offender till his rage is over.

It is now commonly agreed that the fundamental causes of difficult behaviour lie in faulty relationships between the child and the other members of the

family and this explains why frequently only one child in the family becomes a problem. The family situation is essentially different for each child. Take a family of three : the eldest, the first-born, is an only child until the next arrives, she receives the undivided attention of her parents, is proudly shown to grandparents and neighbours, and each new development is commented on. Number two is born : let us suppose it is another girl, number one is jealous as she has to divide with a rival her parents' affection. The emotional feelings are very similar to those that occur in married life if a third party enters the picture. As number one sees her rival gradually taking over all the things that originally were hers, her dolls, her books, it is barely surprising that she feels insecure. Then number three, a boy, arrives and again the emotional bonds are altered. Number one still gets attention for being the first to do things, the first to read, to stay up late. The baby boy is especially favoured, as a son was wanted after two girls, and if the finances permit of a family of only three, the mother, instinctively, will tend to keep him a baby. But what about number two ? She is nobody's business ! She is bossed about by her older sister and if she dares to touch the baby, even although he takes her toys, she gets into a row. She senses the lack of affection or rather is aware of the different distribution of it and naturally tries to get her share. She will follow her parents about until they tell her to stop or she will keep repeating the question : " You do love me, don't you ? " until the parents become quite irritated and tell her to be quiet. Deep down in every child and in every grown-up there is an ego-side which needs attention, and if it cannot get it in the form of affection it will take it in the form of dislike.

Now our imaginary three children have the same parents and the same home, but their environment, their hopes and fears, their relationships with each other, are fundamentally different.

The position of eldest child appears to be specially vulnerable, as is that of the only child or the weaker of twins, but other positions, such as middle of three, youngest, only girl, or only boy, also give rise to their own special emotional problems. Position in family is important chiefly as a determining factor in the parents' attitude towards the child. The majority of children's as of adults' psychological problems have their roots in the emotional attachments between parents and their children. These are the primary causes of instability, although it may be a precipitating factor at a much later date that brings the problem into the open. Let me state at once that for effective treatment it is not always necessary to recall these early emotional feelings: a strain late in life may reveal an underlying problem, but removal of the strain may restore the *status quo*.

The infant's relationship with his parents is all-important, as it forms the basis of all his future relationships. If a child is to develop normally he must feel secure. A steady foundation is the essential preliminary for all growth—something, so to speak, that one can push against. For the first year the child finds his security in the affection of his mother, later in the routine life and dependability of those around him. Children are very observant, and are quick to sense a hostile or strained atmosphere such as is found in broken homes or second marriages, where there are liable to be conflicting loyalties. The more regular and orderly the child's home life the less likely is he to feel insecure, as the routine of well-established habits is

in itself soothing and economizing of energy, for it does not call for frequent decisions on his part. When, however, father says one thing and mother says another, or when permission to stay up late depends not on the facts of the situation but on whether father is tired or not, then at once the child becomes uncertain. Frequently a child is told not to do this or that because "it worries mother," "makes her head worse," or because it "is bad for father's heart"; these reasons are occasionally valid, but more often they are merely a way of side-stepping an issue. Living in some homes is like playing a game of football, with one referee using Association rules and the other Rugby rules—the poor child never knows which code is in force.

The child's first need is security, its second freedom to develop and time, space and material with which to be constructive. One of the more recent discoveries of psychology is that many of the fundamental patterns of life are formed by the time a child is five years old. They may be modified later, but owing to the stress of modern civilization few children or adults get a chance to recreate these early habits. They tend to remain with us throughout life. Personality traits, such as perseverance and courage, are most easily learned before the age of five, a pattern of failure, such as "it is not worth trying" or "no one understands," formed at this age is hard to eradicate. It is not uncommon to be asked to see a lad in his late teens who is a great worry to his parents as he seems to have no ambition, does not know what he wants, and the parents seek advice as to what career he should follow. On taking the history one finds that the parents did not feel the early years were important, and curbed any originality or independence as it was a nuisance in the nursery. As a result he

always did as he was told, and when on leaving school there is no longer anyone to direct him he is lost. A parental attitude of this kind can be a more potent moulding force than any material circumstance, and in considering a child's environment one has, therefore, to investigate the moral as well as the financial standards, the attitude of the parents to their children and to each other as much as the social background, in short, any factor outside the child which is influencing his behaviour.

The investigation of the child is completed when the following questions can be answered: What is the child's present state of health? What is his innate intelligence and does his school work correspond with it? Was the early development normal? How does he fit into the family and what kind of a family is it? How does he adapt himself to failure and success, to difficulties at home and at school? Then one tries to build up a dynamic picture of the child and see the problem as a useful thing looked at from the child's point of view. Taking a long view, a child may be worse off because of his bad behaviour, but nevertheless there is a reason for it, it serves a purpose at the time. It is like the girl who, uncertain of her ability to adapt herself to married life, develops an hysterical limp on the eve of the ceremony; as she is ill she obviously cannot marry, and the conflict is solved, but at a price.

Turning to treatment, the first step is to decide what endogenous and what exogenous factors are present. In certain cases a simple explanation to the parents of how the symptoms have arisen is adequate. Easing up the pressure of school work or convincing the parent that Jimmie is really fit will meet the needs of some cases. This, however, is often not sufficient,

the habit is too engrained or the parents are unable, without outside help, to alter their point of view. Often a child guidance clinic must also function as a parent guidance clinic. Two infants under the age of twelve months have been referred to the clinic and, needless to say, the treatment was directed chiefly towards the parents. Actually in most cases under the age of five the discussion of the problems with the parents is the essential part of treatment. Between the ages of five and ten treatment of both child and parent is equally important. Above the age of ten more and more can be achieved by working with the child alone. One can do a certain amount even if the parents are not co-operative, but in such cases much of the work is likely to be undone between visits.

With children under the age of ten treatment commonly takes the form of "play-therapy." Free use of words and self-expression through them is a relatively late development, so that one perforce has to use the child's normal means of self-expression which is—play. The clinic playroom is a large room with white-washed walls and little furniture. One wall of the room is a blackboard. There are two trays, on legs, filled with sand: a sink and a tap which turns on and off: plasticine, odd bits of wood, a doll's house and a box of assorted lead toys. Here the child is encouraged to be free, he can do or say what he likes provided that he is not deliberately destructive of property or dangerous to other people. He can be critical of members of his family or of other people if he feels like it. Many people are afraid that such free expression will pass over into licence and will become a habit, so that that person's latter state will be worse than his first. There is, however, no more ground for this fear than that

the average patient will develop a keloid. As long as there is a conflict inside a person he remains tense, but once he relieves it in action and, so to speak, gets it off his chest, then he settles down. Our emotions tend to be self-limiting in precisely the same way that our physiological cells seem to know when they have grown to the requisite size. It is very interesting to watch a child, at first aimless, restless, unable to settle, gradually working up to some definite act of aggression. He buries a doll which is symbolic of a hated brother and at once, having perpetrated this act, he feels free, his tension goes and he is able to start constructive work. In the playroom the child is free from the limitations of his home and so is able to solve his own conflicts. With certain kinds of problems it is possible to let two or three children work them out together, but usually each child has to be seen separately.

The full investigation and treatment of each case does take a considerable time. The initial interviews with doctor and psychologist are approximately fifty minutes each. The treatment interviews are either twenty-five or fifty minutes, depending upon the type of case and on how quickly the child can adapt himself to the clinic situation. The time may seem long, but on the other hand the results are worth it when looked at from the point of view of child and society. If it is possible to adjust a persistent case of truancy or stealing in a total time of five to six hours it is surely to everybody's advantage. Many cases are referred because those in authority are at their wits' end, and the only alternative is sending the child away in the hope that someone else will have better luck. A child with a so-called "nasty" disposition can effectively break up the peace of a home, and frequent

scenes between parents and children tire both sides out in a way that physical illness seldom does. The maladjusted child tends to find a victim, usually someone else in the family, and then this child also suffers, and so several members of the family are affected. While when a problem child is helped the parents' tension lessens, they become less irritable and the whole family situation improves.

It is, however, not only the treatment cases but the supervision cases that I hope will arouse your interest in the future, those in which a true appreciation of the problem permits of its being solved by simple measures. There are two groups of cases which are common in general practice where the psychological factors are not always fully appreciated. First, those children with mild somatic complaints such as headache, feeling faint, indefinite gastric symptoms. If there are no gross physical findings the possibility of school difficulties or strain at home as the cause of prolonging the illness should not be overlooked. The essential questions both here and in all behaviour problems are—Does the child profit by being ill? What is the situation that he really does not feel able to face? Children can have anxiety symptoms similar to those of an adult, and I have seen several cases where the "fear of fainting" had been treated for a considerable period as if it was an actual tendency to faint. One usually finds that the fear is linked up with some special situation, such as school prayers or reciting in class.

The second group is formed by the sufferers from chronic conditions where it is easy to overlook the secondary results of our precautionary measures. Being off games is a real handicap to a child; regular attendance at a clinic at the same hour each week for

several months means, in most schools, that it is always the same class that is missed.

When a routine is being drawn up for a boy or girl one should consider his illness in relation to his total personality. It is one thing to order a child to rest for half an hour every day, but if it involves a struggle every time perhaps some modification of it may be worth while; for if the child lies down only because he has to, he is likely to spend most of the time fuming inwardly and in anything but a restful condition. If a child feels well he wants to be active, and if limitation is necessary then a reasonable explanation should be given to him as well as to his parents, and the moment any increase of freedom is possible it is only fair that he should be told.

The importance of the psychological adjuvants to medicine can hardly be overstressed. The influence of the physician's personality has long been recognized, and it would appear that in the future psychological factors must receive even greater attention. Child Guidance is merely one indication of this trend in medicine. Lord Horder a few weeks ago in a public address said: "Inevitably the doctor's work in the future will be more and more educational and less and less curative. More and more will he deal with physiology and psychology and less and less with pathology. He will spend his time keeping the fit fit rather than trying to make the unfit fit."

A LUMP IN THE THROAT.*

BY

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"A LUMP IN THE THROAT" is a complaint by no means rare. I am not now considering acute conditions, but a symptom that—though often dated from some acute illness—has usually been present and perhaps increasing in severity for some weeks or even months before advice is sought. It is definitely so described, the patient commonly indicating the cricoid region, and is frequently the only complaint. Or if accompanied by aching or other symptoms, the latter do not include hoarseness, dyspnœa, or pain on swallowing; and while there may be some difficulty in "swallowing nothing" or the saliva, there is no interference at all to the passage of food or drink—indeed, a meal is often found to relieve the symptoms.

This "lump" is important because it often causes distress out of all proportion to the seriousness of the cause. The terror of cancer is at the back of this—or even in the forefront. Cancer of the throat has a peculiar horror for most people, even those who might

* A Bristol University post-graduate lecture.

accept a diagnosis of cancer in other regions with resignation. When indirect laryngoscopy shows no obvious abnormality, and there are no suspicious neck glands: when the complaint is of "a lump" without hoarseness, or pain or difficulty in swallowing, whatever else is said the patient should always be told definitely at the first opportunity that there is nothing to suggest the presence of cancer. An astonishing number of patients show at once that this fear has been lurking in their minds, though they have given no hint of it, and are far removed from the imaginative or "neurotic."

Examination of the larynx and hypopharynx by the indirect method is obviously the first step to take. Although rare, gross organic swelling does occasionally produce this symptom. A gumma in the base of the tongue, a pharyngeal thyroid gland or an innocent neoplasm may be given as examples: malignant disease in this region almost invariably produces early pain or dysphagia, but if not it will be obvious by the time a "lump" is felt. Hoarseness is rarely absent in tuberculous laryngitis: the form which begins as œdema of the epiglottis is sometimes the cause of a feeling of a lump without other local symptoms, but it is a lesion of rather late pulmonary disease and the condition is manifest on examination of the larynx. To show how similar are the complaints of a patient with an actual swelling to the types described below I may cite those of a recent case: "For some months past I have had a lump in the throat: there is no pain, or difficulty in swallowing, but it feels all the time as if I was going to cry and didn't want to"—she had a mucous cyst of the epiglottis the size of a cherry. Such

cysts, even when they are as big as this, seldom give rise to symptoms.

In the absence of an obvious tumescence we have to decide what is causing the feeling of a lump. And it is possible to recognize three fairly distinct types: although no doubt in many cases two or more conditions are concerned in producing the symptoms, and the practitioner may have to decide whether all are important, and which require treatment.

The Lump which Moves Up and Down.—This is especially common after an attack of influenza, with accompanying pharyngitis; but may occur independently, though usually in patients obviously in somewhat poor health. The lump is not felt during a meal, but there is often difficulty or discomfort in swallowing spittle, with a constant desire to swallow—and with each "swallow" the lump is felt to move. This symptom is nothing more than consciousness of the movement of the cricoid cartilage against the back of the pharynx during swallowing, a sensation that is normally not observed but which is obvious if anyone concentrates on the part during swallowing. Attention has been directed to the throat by the discomfort of pharyngitis, and this is continued when the hyperæsthesia would ordinarily have subsided.

Treatment.—In addition to reassurance, local treatment is directed to rendering the part less sensitive. An astringent lozenge may be ordered, such as Troch. Acid Tannic or Troch. Krameriæ: if at the beginning this is not well tolerated, Krameria lozenges containing Cocaine Hydrochloride gr. 1/40 may be given for a few days. A mixture containing Iron with Quinine or Nux Vomica is often helpful.

The Lump with Aching is most frequently encountered in women. At first it is noticed only when the patient is tired, later it is constant. There is no difficulty in swallowing: or at most the patient may find difficulty in *starting* swallowing, especially with dry food. For the throat is often "dry." Complaint may be made of "sore" throat, but on closer inquiry it is found that aching is meant, and usually the sternomastoid muscles are indicated. On examination the mucous membrane of the posterior wall of the pharynx is conspicuously pale and thin, so that the vessels in the submucosa are prominent: the mucous membrane of the nose shows the same changes, and the inferior turbinals are small, permitting the posterior wall of the naso-pharynx to be seen through the nostrils. The condition is associated with defective thyroid activity, and other evidence of this, including goitre, may be found. *Treatment* must be directed to the general condition: as a rule only a small dose of thyroid substance is required, but it may have to be continued over a long period. In the early stages local treatment also may be needed. A sedative lozenge which stimulates the flow of saliva is particularly useful, such as that composed of Chlorate of Potash and Borax, with one part per thousand of Cocaine Hydrochloride: this small addition appears to have a definite effect and does not bring the lozenge within the scope of the D.D.A.

In connection with this group I may mention the dysphagia-anæmia-stomatitis syndrome: not that the subjects of this complain of a "lump" in the throat, but because they do sometimes, before there is any real dysphagia, complain of discomfort or a sense

of tightness there; and the syndrome may be incomplete, lacking the stomatitis or any obvious anæmia. The latter is a secondary anæmia with deficiency in hæmoglobin, and a colour index below unity. The stomatitis affects the pharynx, the inner surface of the lips, the angles of the mouth, where deep cracks may occur, and the tongue, which loses its papillæ. Massive doses of iron are necessary.

The Emotional Lump is traditionally associated with sorrow or pity, rather than anger or fear, and is due to an actual spasm of the inferior constrictor of the pharynx. The classical "globus hystericus" is "a ball which comes up in the throat and chokes me," and there is usually accompanying inability to swallow: it is transitory and recurrent, and occurring in a patient of obvious emotional instability is not likely to present difficulty in diagnosis. It is otherwise, however, when, at the other end of the scale, we are told of a lump which is constantly present in a well-nourished, hard-working, apparently placid and intelligent middle-aged male, with sufficient insight to have made sure that there is no obstruction to breathing, speaking or swallowing: who may, it is true, fear cancer, but is certain that the lump was there before any such idea entered his head. As the condition progresses there may be aching pain, usually rather lower down behind the upper part of the sternum; and the sense of constriction in the throat may become sufficiently intense to lead to retching, though without nausea. There may occur, also, a clicking sound in the throat, audible to others, either with each expiration, or every few seconds, especially

when the patient lies in bed, or holds the head in a particular position.

In many patients (possibly in all) the origin is in emotional strain, especially sorrow or pity, including self-pity: and the sufferers are the apparently unemotional, even stoical, individuals who so far from desiring sympathy, seek above all to stifle their troubles and present an unruffled face to the world. What makes matters more difficult is that these troubles are genuine: one might instance the case of a man who had served his firm faithfully and successfully for thirty years, and just when he might have expected promotion was discarded owing to an amalgamation; another who had been "let down" in an important matter by someone whom he had every right to trust; and perhaps most common of all, those who have suffered the loss of dear friends or relatives. An officer who had served unscathed for four years in the forward area in France in the Great War confided that ever since then he had been unable to read a pathetic passage in a book or to witness one on the stage without tears coming to his eyes and a *lump in the throat* (which he later recognized was just the same as the "lump" that brought him for advice), though he tried always at first to overcome and later to conceal what he regarded as an unmanly and degrading weakness. Sexual difficulties have not come within my cognizance: perhaps I am a poor psychologist.

Treatment of this condition demands, first, a complete examination, including laryngoscopy, or even œsophagoscopy under general anæsthesia if necessary; and every additional method of investigation, such as

X-rays, pathological tests, etc., that appears at all likely to help: it is essential to convince the patient that there is no local disease, and the detection of the cause of emotional strain, or even the explanation that this is the origin of the trouble, is a great help. Local treatment is useless, and worse. In a severe case the best remedy is a mixture containing a small dose of opium: I do not believe these patients are likely to develop a "habit," provided the mixture is used for two or three weeks only. Bromides are too depressing for use alone, but a small dose at night may be valuable: one or two "Sedobrol" tablets in a cup of hot water are excellent. If the spasm is severe the patient may carry tablets of atropine, gr. 1/50, to place under the tongue when a bad attack threatens; he is, of course, warned not to take more than one in twenty-four hours. But the key-note in this, as in other "lumps in the throat," is to convince the patient that the sensation is merely an exaggeration of a normal condition, and that there is no serious organic disease present.

Summary.

The symptom discussed is a "lump" in the throat, without hoarseness, or pain or difficulty in swallowing food; there may be aching, or difficulty in swallowing saliva. Fear of cancer is common, and the patient should always be reassured about this as early as possible. Rarely there is an actual swelling visible by laryngoscopy, and producing exactly the same sensations. The usual finding is one or more of:—

1. Pharyngeal hyperæsthesia, with or after pharyngitis. *Treatment*, astringents.

2. Aching, dry throat in hypothyroidism. *Treatment*, thyroid gland, local sedatives.

3. Emotional spasm of constrictor (especially in the stoical). *Treatment*, explanation of causation, and, if necessary, opium and bromides.

THE BRISTOL ROYAL INFIRMARY BICENTENARY.*

THE two hundredth anniversary of the opening of this the oldest provincial teaching hospital in the kingdom was officially celebrated on 21st and 22nd October. On the evening of 21st October the Right Honourable the Lord Mayor of Bristol and the Lady Mayoress held a reception in the Art Gallery, attended by about a thousand guests: Aldermen, Councillors, Governors, Honorary Medical Staff and supporters of the Royal Infirmary. Several features of special interest were provided, which included an exhibition of paintings, drawings and engravings of the Royal Infirmary buildings at various times and of persons connected with its early history. Amongst these were:—

Portraits of John Elbridge, the Founder; Dr. Bonython; Richard Smith and other early Physicians and Surgeons.

The Vellum Book containing lists of early subscribers, including most of the eminent Bristolians of the early eighteenth century.

The first Patients' Admission Book.

A Model of the first Building.

Drawings and Engravings showing the site before the erection of the first Infirmary.

Photographs of the opening of the Extension in 1912.

Examples of the Committee's Gold Medal, the Paul Bush and other Infirmary Medals.

The following short account of the Royal Infirmary was included in the programme which the guests received:—

About the middle of the year 1736 Dr. Bonython, a physician of Cornish extraction, who practised for many years

* With acknowledgements to *The Times* and *The Western Daily Press*.

in Park Row, near the Red Lodge, conceived a scheme to set up an Infirmary in Bristol. He printed his proposals, and a subscription book ("The Vellum Book") was opened on 22nd November, 1736. The first General Meeting of Subscribers was held on 23rd December, 1736, when John Elbridge was appointed Treasurer. Elbridge was a New Englander. His parents had left Bristol to settle in Massachusetts, and there he was born. At the age of twelve he was sent back to Bristol, where he lived with his cousin Thomas Moore, whom he succeeded as Controller of His Majesty's Customs in Bristol. John Elbridge was a wealthy and generous benefactor, who built and furnished the Bristol Infirmary at his own sole expense. He died a year after its opening, bequeathing £5,000 to the institution. He is the acknowledged Founder of the Charity.

The Infirmary stands on a parcel of land which once belonged to the Priory of St. James. The present St. James' Church was the Chapel of that Priory which was founded in 1129 by Robert Earl of Gloucester for the black monks of the Benedictine Order.

On the 30th June, 1737, the Infirmary was quietly opened for out-patients, and the ceremonial opening took place on 13th December, 1737, when the Mayor and Corporation, the Faculty (*i.e.* the Medical Staff) and the Trustees met at the Infirmary, proceeded to Divine Service at St. James' Church, and finished the day with a dinner at the Nag's Head Tavern.

In 1700 Kingsdown was still a down. An estate called the Montagues, belonging to the Dightons (their name is recalled by Dighton Street), was bought by Charles Greville, who built on it the Montague Tavern, in 1737. He also began to build on the down a suburb, and in 1760 two newly-built houses were offered for sale, one of their advantages being that children could be sent there for the holidays "to get fresh air."

In 1749 at a Quarterly Meeting of Subscribers it was decided to place over the entrance to the Infirmary "in gold letters" the inscription "Charity Universal," and this inscription was replaced over the entrance of the new building which was opened in 1792. For by that time the first Infirmary (Elbridge's building) had proved inadequate; it was pulled down and a new one erected of which the central wing was completed by 1792. The remainder took twenty years more to build. This is the present old Infirmary whose appearance was at a later date greatly altered by the addition of a parapet which conceals the original red-tiled, gabled roofs. Further

changes were made in 1860, when the East Wing, containing the Chapel and Museum, were added, and in 1866, when the West Wing which houses the Children's Ward was erected at the expense of Mr. T. W. Hill.

In 1875, owing to its insanitary state, the Infirmary was closed for alterations, and the work of the Charity was carried on in temporary premises in Colston Street for twelve months. After this no major alterations were made to the buildings until Sir George White became President in 1904. By his efforts the Infirmary was cleared of debt, the number of annual subscribers was greatly increased, and a special fund of £50,000 was raised by the end of 1906. This fund was devoted to the erection of the new wing, which was opened on 28th June, 1912, by Their Majesties King George V and Queen Mary, as a memorial to King Edward VII. From 1914 to 1919 the King Edward VII block was occupied as a War Hospital (2nd Southern General Hospital).

The presidency of Sir George White marked a notable era in the history of the Royal Infirmary (permission to add the word " Royal " to the title of the institution had been granted by Queen Victoria in 1850). Not only was the new block added on the north side of Marlborough Street, but the Nurses' Home was largely extended, and the magnificent garden surrounding the Home was formed and thrown open to public view by demolishing the house at the foot of Alfred Hill.

At the close of the War, during the Presidency of Mr. H. H. Wills, an endeavour was made to amalgamate the Royal Infirmary and the General Hospital. The attempt was unsuccessful, and a sum of £100,000 which Mr. Wills had offered in order to finance the project was given by him to the Infirmary.

Although Mr. Wills did not live to see his wishes fulfilled, his plan of amalgamation was agreed to by the Governors of both institutions, in March, 1937. Thanks to the patient handling of the proposal by all concerned, identical resolutions were passed at meetings of the Governors of the Infirmary and Hospital requesting the Committees to take the necessary steps to amalgamate the two institutions with central management and pooling of funds. The Committees are now engaged upon formulating a scheme for giving effect to the subscribers' wishes.

Thus the Bicentenary of the Royal Infirmary marks not only two hundred years of effort for the alleviation of sickness and suffering, but also the close of over a hundred years of unprofitable rivalry.

The Museum and Art Gallery Committee arranged an exhibition of films in the Museum Lecture Theatre :—

1. The Cloud Burst and Floods in Bristol, 29th June, 1937, when two inches of rain fell in 40 minutes.

2. Civic Procession to Bristol Cathedral, Sunday, 9th May, 1937.

3. Bristol's Floral Decorations for the Coronation, May, 1937, in natural colours, depicting: Blaize Castle Nursery, College Green, Corn Exchange, Guildhall, Council House, St. Mary Redcliffe (Rush Sunday), Mansion House, Red Lodge, Victoria Rooms, Royal West of England Academy, Royal Empire Society, Museum and Art Gallery, Colston Hall, Old Market Street, Docks Office, Colston Avenue, Night Illuminations.

These natural colour films were a revelation to most of the audience of the progress that has been achieved in this direction.

The City of Bristol Police Light Orchestra provided the following programme of music :—

1.	March ..	"Aguero" ..	*Franco*
2.	Valse ..	"Narenta" ..	*Komzak*
3.	Serenade ..	"Moontime" ..	*Collins*
4.	Ungarische Tanze No. 1. ..	..	*Brahms*
5.	Chanson Indoue ..	..	*Rimsky-Korsakov*
6.	Valse ..	"Emperor" ..	*Strauss*
7.	Selection	"The Student Prince" ..	*Romberg*
8.	Chanson ..	"In Love" ..	*Friml*
9.	Selection ..	"Lilac Time" ..	*Schubert-Clutsam*
10.	Valse ..	"Gold and Silver" ..	*Lehár*
11.	Selection from Sullivan's Works ..		*Arr. Godfrey*
12.	Humoreske	.. ..	*Dvořák*
13.	Toreador et Andalouse ..	.. ..	*Rubenstein*
14.	Selection ..	"Bitter Sweet" ..	*Coward*
15.	Valse ..	"Die Hydropaten" ..	*Gung'l*

GOD SAVE THE KING.

Director of Music .. .. Captain F. W. WOOD, M.V.O.

The Lord Mayor, in welcoming his guests, referred to the continuous and happy association between the City authorities and the Infirmary throughout the latter's existence, for the formal opening two hundred years before was attended by the then Mayor and Aldermen. He felt assured that the new developments in the provision of medical services in the City would continue to exhibit the same happy spirit of co-operation.

On Friday, 22nd October, *The Times* printed an account, from which the following is taken :—

In the autumn of 1737 the Bristol Infirmary, now called the Bristol Royal Infirmary, was opened for the reception of in-patients. It is believed that, outside London, this was the first hospital in the country to receive in-patients.

The state of the sick poor in the eighteenth century cried aloud unto Heaven. Poverty, overcrowding, ignorance, and the lack of public sanitation were terrible. Most large towns had a pauper institution—that in Bristol being called St. Peter's Hospital—to which persons could be taken if they were homeless and very ill, but for the most part the poor were dependent for treatment on the almost gratuitous service of apothecaries, who were often quite uneducated. A leading part in the foundation of the Infirmary was taken by John Elbridge, Richard Champion and Dr. John Bonython, who became the first physician. It seems that the original building was built and furnished at the sole expense of John Elbridge. He was born in Massachusetts of British parents, came back to Bristol in childhood, and became Controller of His Majesty's Customs.

SURGICAL CURIOSITIES.

The Infirmary has been singularly fortunate in its chroniclers. Richard Smith, jun., surgeon from 1796 to 1843, had a passion for collecting. He collected specimens to found a museum, still in regular use for the instruction of students, and placed in it not only a great number of specimens illustrating surgical pathology, but curiosities such as the skeletons of persons hanged in Bristol for crime, whose bodies were handed over for dissection. All the records of one such trial are preserved bound in the victim's own skin. There is also

in his museum a femur, which is reputed—though no doubt the claim will be challenged—to be from the first amputation at the hip joint in England. The patient was one Sebastian de Chamours, of the Chasseurs Britanniques, who sustained a bullet wound of the thigh in the Napoleonic Wars, and evidently languished a long time with necrosis of the bone. Whether the unfortunate Frenchman lived or died there is no evidence to show. Richard Smith also rescued various garments and remains of Patrick Cotter, the Irish giant; he could not get the actual skeleton because the giant, warned by the fate of his predecessor who fell into the hands of John Hunter and who now occupies a glass case at the Royal College of Surgeons in London, had himself buried in 12 ft. of solid rock under a Roman Catholic chapel. Smith also collected innumerable details, of a chatty kind, about everybody and everything connected with the early history of the institution. All his wealth of information, gay and sober, lay almost unheeded until twenty years ago, when Munro Smith, another Infirmary surgeon, compiled his *History of the Bristol Royal Infirmary*. Probably no other hospital in the country has been the subject of such a chronicle, with such plentiful information, and related with so much gaiety.

GREAT NAMES.

It must be admitted that changes for the better, the introduction of anaesthetics, of flap methods of amputation, of antiseptic wound treatment, and other more recent innovations, usually met with mulish opposition from a stubborn minority, and sometimes a resignation or two by those who thought the old was better. Stories survive of the hardships of those times, but behind it all there has been a record of 200 years of human kindness—usually of skilled kindness—of lives without number saved and made useful again, and of steady progress, making available even for the poorest all the resources of every advance in medical treatment. There have been great names on the roll of the honorary staff: James Cowles Prichard, the ethnologist; William Budd, probably the greatest pioneer among British epidemiologists; Greig Smith, one of the fathers of abdominal surgery in Britain.

To-day the hospital has 400 beds; the number of in-patients annually treated is 10,305 and of out-patients 70,570. It is a remarkable fact that nearly one-quarter of the babies born in Bristol are brought into the world under

the care of the indoor or outdoor services of the Royal Infirmary.

In the afternoon many former students and nurses were entertained at the Infirmary by the President and Committee, and had an opportunity of visiting the buildings and seeing what improvements had been made, particularly in the development of the Fracture Department and the provision of sun roofs and balconies.

DINNER AT UNIVERSITY UNION.

The culmination of the celebrations was a dinner at the University Union—in strict accordance with eighteenth-century precedent. Besides the high table, tables were arranged for parties of various sizes, and among the 339 guests present were representatives of the religious, civic, social, professional and commercial life of the city and district. Lady (Vernon) Wills had very generously assumed responsibility for the decorations, and the masses of rosebuds which adorned every table produced a really charming effect: there was universal regret that owing to indisposition the donor was herself prevented from attending.

Supporting the President of the Royal Infirmary, Colonel P. G. Robinson, D.S.O., at the high table were the Right Honourable the Lord Mayor and Lady Mayoress of Bristol (Mr. A. F. Moon and Miss Kathleen Moon), the Sheriff (Lieut.-Comdr. Vivian J. Robinson) and the Hon. Mrs. Robinson, the Right Reverend the Lord Bishop of Bristol (Dr. C. S. Woodward), the Bishop of Clifton (Monsignor W. Lee), the Mayor and Mayoress of Bath (Mr. W. F. Long and Mrs. Long), Alderman Frank Sheppard (Chairman of the Royal Infirmary), Mr. Herbert M. Baker (Chairman of the

General Hospital), Mrs. P. G. Robinson, the Dean of Bristol (the Very Rev. H. W. Blackburne), Colonel Dan Burges (Master of the Merchant Venturers) and Mrs. Burges, Dr. T. Loveday (Vice-Chancellor of Bristol University) and Mrs. Loveday, His Honour Judge Wethered and Miss Wethered, Professor R. J. Brocklehurst (Dean of the Medical Faculty of the University) and Mrs. Brocklehurst, Professor E. Fawcett, F.R.S., Professor and Mrs. H. J. Drew Smythe, Professor and Mrs. C. B. Perry, Professor and Mrs. S. E. Whitnall, Dr. E. C. Morland (Editor of *The Lancet*), Professor R. H. Parry (Medical Officer of Health), Major E. Cadbury (Treasurer of the Infirmary), E. C. Smith, Esq. (Secretary and House Governor) and Miss E. Johnston (matron).

Dr. and Mrs. P. Watson-Williams, Dr. and Mrs. R. Charles, Professor and Mrs. J. A. Nixon, Dr. and Mrs. R. C. Clarke, Professors A. Rendle Short and the Honorary Medical Staff of the Infirmary.

The hospitals of Great Britain were represented by Dr. C. E. Purslow, M.D., M.R.C.P., R. Beatson Hird, Esq., F.R.C.S. (Birmingham Royal Infirmary); Dr. Ivor J. Davies, M.D., F.R.C.P., Professor Lambert C. Rogers, F.R.C.S., F.R.A.C.S. (Cardiff Royal Infirmary); Miss E. E. P. MacManus, O.B.E., Dr. H. C. Cameron, M.D., F.R.C.P. (Guy's Hospital); Dr. C. Wilfrid Vining, M.D., F.R.C.P. (Leeds Royal Infirmary); R. Stopford-Taylor, Esq., D.S.O., F.R.C.S., Captain William Rutter (Liverpool Royal Infirmary); Professor L. Stanley Dudgeon, C.M.G., C.B.E., F.R.C.P., Mr. J. Herbert Scrutton (St. Thomas's Hospital); A. W. Fawcett, Esq., F.R.C.S. (Sheffield United Hospital).

Edinburgh Royal Infirmary, The London Hospital, Manchester Royal Infirmary and St. Bartholomew's

BRISTOL ROYAL INFIRM ENTEN

INFIRMENTENARY DINNER, 1937

UNIV. OF MICH.

Hospital were unable to send representatives, but offered congratulations on the occasion and sincere good wishes for the success of the celebrations.

Alderman Frank Sheppard proposed "The City and County of Bristol." He said Bristol was rich in charities and historical associations, but generally its citizens knew all too little of them. He spoke warmly of the way Mr. A. F. Moon had carried out his duties as Lord Mayor, and remarked that it was a fine characteristic of English local government and politics that men of opposing views could retain their friendship.

Alderman Sheppard said that he had the greatest admiration for those responsible for running the Royal Infirmary, with which he had been associated for twenty years. The city was very proud of its work, and so long as such institutions could command the same devoted service as in the past, there need be no fear for their future. They were thankful that there were men of ability ready to give their best to the sick poor of the city.

The Lord Mayor responded, and proposed the "Bristol Royal Infirmary."

He said that if young people to-day would give as much of their time to public service as Alderman Sheppard had, there need be no anxiety for the city's future.

"It is the standard of her people that makes a city great," said the Lord Mayor, "and we are all trying to make that standard as high as possible."

He said no one had a greater regard for work of the Infirmary than he had, and he paid his special tribute to the nurses, "with their charming presence and cheerful smiles."

Speaking of the constant support necessary to maintain the work of a great hospital, he said there had been men of splendid benevolence in the past, and to-day it was a matter for gratitude there were some following in their steps.

Colonel P. G. Robinson, in reply, said how sorry they were that the illness of the Duchess of Beaufort prevented the Duke from attending, and remarked that the Duke's family had been directly associated with the Infirmary for something like 160 years.

He contrasted the first year of the Infirmary's existence, when 194 in-patients and 234 out-patients were treated, with last year, when the corresponding numbers were 10,300 and 70,500. The first year's expenditure was £434 and last year was £72,000.

Happily the Royal Infirmary had always kept abreast of changing conditions.

"To-night," he said, "we are at the birthday party of a serene old lady born in the time of George II, and we are here to celebrate, not her antiquity, but the fact that she has been able to go on with increasing usefulness for 200 years. Indeed, she is so young that she is even contemplating matrimony.

"I cannot say whether she is the wooer or the wooed, or whether it is a love match or a marriage of convenience . . . but I can tell you that all her friends are confident of the happy outcome of this rather tardy adventure."

The President went on to announce that three benefactors of the Royal Infirmary had come forward with generous gifts to mark the occasion: Mr. S. H. Justin had given them £1,500; the executors of Mr. Samuel White had given £1,050; their treasurer, Major E. Cadbury, had given £1,000.

In thanking the benefactors, the President ventured to hope that others would follow their good example!

Mr. A. Rendle Short, senior surgeon at the Royal Infirmary, responded on behalf of his medical colleagues.

He said that 200 years ago the condition of the sick poor in Bristol, as elsewhere, was deplorable in the extreme. In those circumstances, medical men and business men united in pioneer work to serve the community, and they blazed a trail that had been happily maintained ever since.

During half the period of the Infirmary's history surgery had been performed without chloroform anæsthesia.

"In those days," said Mr. Rendle Short, "operations were great occasions. Newspaper accounts used to read: 'Yesterday Mr. Richard Smith cut for the stone at the Bristol Infirmary in the presence of the Mayor and several gentlemen.'"

The surgeon's record book for 1875 showed operation after operation leading to disaster, often after the most trivial surgical procedures. Shortly after the introduction of the antiseptic treatment those horrors diminished.

A rhyme related about Dr. J. C. Prichard, the ethnologist, ran:—

> "He leaves his patients full of sorrow—
> They must be cupped to-day and bled to-morrow."

At another period the cellars of Bristol were said to be scoured clean for cobwebs which a leading physician used to prescribe for his patients.

Mr. Rendle Short wondered if fifty years hence treatments favoured to-day would appear equally grotesque.

He referred to the pioneer work which had been done at the Royal Infirmary in many branches of medicine and surgery, and said it had also become an important training ground for medical students and nurses.

There was a time, however, when the senior resident officer used to stand in the lodge to see that the one and only night nurse was sufficiently sober to go on duty ! But by degrees the nursing service had vastly improved. There was more kindness in the treatment of hospital patients now than there was even so comparatively recently as the beginning of his own experience. Although two hundred years old, the Royal Infirmary was by no means senile : he had never known a time when there were so many visions of further progress. The best medical service in the city could be provided by team-work, which would afford first-class service in every branch of medicine and surgery. For this the city required a single medical centre, serving alike the voluntary hospitals and the municipal hospitals. In conclusion, he would remind his hearers how very deeply they were indebted to the little Committee who had arranged the Bicentenary Celebrations and especially to the Secretary, Mr. Eric Watson-Williams, who had been responsible for the organization of the dinner that evening.

Dr. P. Watson-Williams as senior member of the Royal Infirmary Faculty proposed the toast of " The Guests." He paid a tribute to the Lord Mayor and Lady Mayoress, and those who represented every aspect of religious, civic and social activity in Bristol and the neighbourhood, and went on to voice the very hearty and sincere thanks of the Infirmary to the delegates from British hospitals for the pains they had taken in coming long distances to do honour to the

occasion. It was often helpful to have the criticisms from those without. When some years ago, with a party of the British Medical Association, he visited Toronto and the United States, they had many questions to answer as to their impressions of the country they were visiting. One of the party, with more temerity than discretion, asked a charming hostess what had struck her most about us. "Well," she replied, "if I may say so, it is your very strong British accent."

The time was drawing to a close, so he recalled to mind the old Sussex saying, "Every time a sheep baas, he misses a tuft of grass," and he would be brief, as they hoped for many tufts of grass from those who would respond to the toast of our guests.

He had been attached to the Royal Infirmary for more than half a century, when one had no X-rays, no bacteriology, and cases of typhoid fever and diphtheria were not excluded from the general wards. What strides and advances we had made in so many directions!

Of the many movements of thought and problems ripe for research one was how to grapple with the mental defective. But another was the equally important question of the causal relationships between disease and moral delinquency and crime. Even as far back as the thirteenth century St. Thomas Aquinas envisaged this and enjoined that punishment should be always medical.

If at length we are to take the most judicious steps in bringing these problems to a practical and wise solution science wanted the guidance and active collaboration of all that spiritual aspect of life which our Lord Bishop stood for.

The Bishop of Bristol responded in a speech of memorable urbanity and wit which his audience received in a manner that testified their appreciation; and Miss MacManus also spoke, receiving an ovation when she rose which amply demonstrated how affectionately she is remembered in Bristol.

Reviews of Books

A Text-Book of the Practice of Medicine. Edited by F. W. Price, M.D., C.M., F.R.C.P., F.R.S.E. Fifth Edition. Pp. xli., 2,038. London: Oxford University Press (Humphrey Milford). 1937. Price 36s. (printed on India paper, 45s.).—Judging from the requests which reach the librarian, a new edition of Price's *Text-book of Medicine* must be a great event in the life of the average medical student. A comparatively brief glance at the fifth edition will suffice to show that this great popularity is truly well deserved. Price's *Medicine* is probably the most successful example of the symposium type of text-book in which each subject is dealt with by its own particular specialists, and it is a very worthy product of the London School of Medicine. For the student it is more than a mere text-book—in fact, it might almost be called an encyclopedia, since it not only covers the whole of general medicine, but in addition deals fully with tropical medicine, diseases of the skin and psychological medicine. The scope of the book may be illustrated by the fact that sections added to the new edition range from chiufa to glycogen disease and from leuco-erythroblastic anæmia to electrical injuries. Many sections have been rewritten, a fresh classification of Bright's disease is introduced, and the nomenclature of the anæmias has been altered. With the continual addition of new matter, and the incorporation of fresh advances, the book is bound to increase in size despite the most vigorous pruning, and the fifth edition sees a new attempt to cope with this. An India paper edition has been published in addition to the ordinary copy. Thus to those who can afford it there is available a complete edition much reduced in bulk and weight. The text in both is clear, although in the ordinary edition the thin type of paper used tends to allow the print to show through from the opposite page. It is difficult to see how this can be avoided without making two volumes. The illustrations are clear and the index full and adequate.

Minor Maladies and their Treatment. By L. WILLIAMS, M.D. Seventh Edition. Pp. xiii., 439. London: Baillière, Tindall and Cox. 1937. Price 10s. 6d.—This little book, which has run into many editions since its inception in 1906, is written for the general practitioner who starts straight from hospital, with very little idea of how to treat the common minor medical maladies which surround him. Dr. Williams mentions in the introduction that the book is egotistical and, in parts, heterodox. Reading the book, one finds it very easy to agree with him. Many of his methods are out of date, intestinal toxæmia features very frequently, and a "gouty diathesis" is the basis of many ills. His conclusions, in many cases, lack either scientific or therapeutic proof, and many of his prescriptions tend towards polypharmacy. There are helpful chapters on general health, certification of lunatics and dietetics, but one feels that a chapter on the recognition of the more common neuroses should be included in any book of this nature. It contains, however, many glimpses of wisdom and is an eminently readable and, in parts, rather amusing book.

Treatment in General Practice. By several authors. (Reprinted from the *British Medical Journal*.) Pp. x., 250. London: H. K. Lewis & Co. 1936. Price 8s. 6d.—This book, a (delayed) republication of a series in the *British Medical Journal*, 1934–1935, consists of thirty-six articles by different authors on respiratory, infective, and vascular disorders, the whole designed to present in unison "a panorama of current therapeutics." Present clinical preoccupation and approach are shown by the place of coronary thrombosis, thyrotoxic heart, and new growth in the lungs amongst the older orders—pneumonia, septicæmia, rheumatic carditis. Practitioners of early or of long experience will find guidance or confirmation in what to adopt or discard in doubtful or critical hours. The editors are aware that the art of medicine does not stand still, and that day by day the laboratories make new gifts to the bedside. The book opens with Lord Horder's observations on influenza, and concludes with electrocardiography (Dr. A. Hope Gosse), "the writing which is still an unknown language to many."

Failure of the Heart and Circulation. Edited by T. EAST, D.M., F.R.C.P. Pp. vii., 130. Illustrated. London: John Bale, Sons and Curnow Ltd. 1937. Price 2s. 6d.—In this contribution to the Pocket Monograph series Dr. East has

attempted to explain in a simple way what happens in the circulation when the heart fails. He has succeeded admirably. The book can be most heartily recommended both to busy practitioners and to students as a companion to their text-book of general medicine. It summarizes in a most lucid and interesting manner the modern views on failure of the heart. Symptoms are discussed and explained on a physiological basis, and we are also shown how to recognize the warning sign of impending cardiac failure. A large chapter is devoted to treatment, which is dealt with on similar physiological principles. The text is clear, and there is a good index.

Diseases of the Heart. By Sir THOMAS LEWIS, C.B.E., F.R.S., M.D., D.Sc., LL.D., F.R.C.P. Second Edition. Pp. xx., 297. London: Macmillan and Co. Ltd. 1937. Price 12s. 6d.—In the second edition of his invaluable exposition of diseases of the heart Sir Thomas Lewis has revised the whole text and incorporated the relevant recent advances in our knowledge. This book presents in simple and understandable language the essential facts of cardiology, and throughout the keynote has been simplicity. Ruthless pruning has stripped the subject of all the needless detail and trite phrases with which medicine is encumbered at the moment. Emphasis has been laid on easily appreciated physical signs, and the dominant importance of the patient's symptoms is stressed throughout. Representing as it does an outline of the clinical teaching, which has hitherto been the exclusive privilege of students of University College Hospital, it can be wholeheartedly recommended to all those students and practitioners who have been less fortunate.

Infants in Health and Sickness. By R. E. STEEN, M.D., F.R.C.P.I. Pp. xi., 127. Illustrated. London: Oxford University Press. 1937. Price 5s.—All who are conversant with the infant section in Tweedy's *Practical Obstetrics* will welcome the appearance of this excellent synopsis under a separate cover. The work deals mainly with infant feeding and digestive disorders, and is designed for general practitioners and students, and for all members of the nursing profession concerned in the care of infants during the first year of life. In presenting a difficult subject clearly and concisely in little more than 100 pages the author has achieved what some have failed to do in two or three times the space. The book is,

in fact, almost a miracle of compression, and should prove of extreme value for quick reference particularly to the newly-qualified doctor faced for the first time with the many practical and sometimes urgent problems connected with this branch of his work. The book concludes with a useful list of diet sheets and a table showing the composition of various proprietary foods.

Chronic Streptococcal Infection as a Disease. By J. D. HINDLEY-SMITH, M.A., M.R.C.S., L.R.C.P. Pp. x., 44. London: H. K. Lewis & Co. Ltd. 1937. Price 3s. 6d.—In this small volume of fifty pages the author has summarized his views on the "disease entity of chronic streptococcal toxæmia," a subject previously dealt with by him at greater length in a volume which was reviewed in these columns (Vol. LIII., No. 199, 1936). He has added little to his conception of the continuity of chronic streptococcal infection from childhood to middle age. His diagnostic proof of the part played by the streptococci is still the "streptococcal index" of throat swab cultures, and his main line of treatment is still subcutaneous autogenous vaccines, to which he now adds "spray" and "oral" administration of streptococcal suspensions. He justifies this use of different types of vaccines by unorthodox and somewhat contradictory hypotheses, but his main purpose of attracting attention to the possibility of avoiding many of the chronic ills of middle and old age by the eradication of streptococcal infections in childhood is still the manifest and commendable basis on which this volume should be judged.

Reports on Chronic Rheumatic Diseases, No. 3. Edited by C. W. BUCKLEY, M.D., F.R.C.P. Pp. x., 131. London: H. K. Lewis & Co. Ltd. 1937. Price 10s. 6d.—This third volume of the Report is, if anything, better than the two earlier numbers. The problem of chronic rheumatic diseases is discussed authoritatively from a number of standpoints. Several of the articles are in the nature of stock-taking of our knowledge and attitude towards certain therapeutic measures, *e.g.* vaccines, sympathectomy, X-Ray therapy, and chrysotherapy, and these will be found particularly valuable; so also will the synopsis of recent American investigations by the Secretary of the American Committee for the Control of Rheumatism. Among the many other smaller articles and reviews should be mentioned the critical commentaries on "Vitamin Deficiency and Chronic Rheumatism," "The Place of Sodium Salicylate

in the Treatment of Gout," and "Still's Disease." The whole volume is packed with valuable and interesting material and there is no doubt that the maintenance of the high standard of excellence of these Reports will ensure an increasing demand for them and for further numbers of the series as they appear.

Medico-Legal Aspects of the Ruxton Case. By J. GLAISTER, M.D., D.Sc., and J. C. BRASH, M.D., F.R.C.S.E. Pp. xvi., 284. Illustrated. Edinburgh: E. & S. Livingstone. 1937. Price 21s.—The contemporary press is always anxious to give full publicity to the medical aspect of crimes that attract nation-wide interest, but to the medical reader the information appears frequently distorted, and essential facts in the chain of evidence are lacking. It is therefore of considerable interest to read the whole clinical details of the Ruxton case, and to find them set out with complete lucidity. The authors have given the scientific evidence in full detail and illustrated with excellent, if somewhat gruesome, photographs. One of the outstanding features of the case is the diverse specialities involved; radiology, dentistry, chemistry, hæmatology and many other aspects of medical science all played a part in the chain of circumstantial evidence that led up to Ruxton's conviction. The book is a mine of information on the utilization of modern medico-legal methods and should prove of real interest to many readers. The concluding chapter is devoted to Mr. Justice Singleton's summing-up of the scientific evidence, and in view of the importance of the legal approach to scientific evidence, might well have been given in greater detail. Altogether a most interesting book that well repays perusal, although not to be recommended for reading last thing at night; it is too like the Chamber of Horrors.

The Sanitary Inspector's Handbook. By H. H. CLAY. Third Edition. Pp. xxii., 480. Illustrated. London: H. K. Lewis & Co. Ltd. 1937. Price 16s. 6d.—It was anticipated, in view of the new legislation which has recently come into force, namely the Public Health Act, 1936, the Housing Act, 1936, the Public Health (London) Act, 1936, and other Acts and Regulations connected with public health, that a new edition of this very well-written and useful book might be expected. The book is right up to date—all the amendments and modifications of the procedure rendered necessary by the new legislation are very clearly described in detail. The format is adhered to, the same excellent arrangement of chapters, each

concise in form but containing a wealth of information covering every possible aspect of the particular section. The epitome of the legislative clauses which commence each chapter is couched in simple and easily readable language and forms an excellent introduction to the subject-matter which follows. There are several additional illustrations, that showing a plan of the drainage system of a dwelling-house being a fine example of reproductive detail. There are over a hundred more pages in the new edition and each chapter has been revised and enlarged. The author has in this practical and concise handbook produced a volume which will be regarded not only as a standard work for students, but a reference for various classes of public health officials. We can recommend this new edition, crammed with technical information, well written by one who is a recognized authority on his subject, not only to sanitary inspectors but to all officers engaged in the public health service.

The Scientific basis of Physical Education. By F. W. W. GRIFFIN, M.D. Pp. viii., 203. London: Oxford University Press (Humphrey Milford). 1937. Price 7s. 6d.—The general public is, at the present time, being made very health-conscious, what with the State campaign for national fitness and the British Medical Association's proposals; national playing fields and Leagues of "Health and Beauty," and so on. Dr. Griffin's book sets out to assist the medical man who may be called in consultation by organizers of physical education and general "fitness campaigns." It is largely a summary of the scientific knowledge now available, and quotations abound, especially from Samson Wright's *Applied Physiology*. There is also a very comprehensive bibliography of over sixteen pages out of the two hundred which make up the book. In the last chapter an attempt is made to designate physical types in the same race, for determining the suitable form of education. The book is undoubtedly sound and is presented in the publishers' usual efficient manner.

Post-graduate Surgery. Edited by R. MAINGOT, F.R.C.S. (Three volumes.) Pp. xii., 2,012. Illustrated. London: Medical Publications Ltd. 1937. Price 70s.—This is truly a notable publication. The first volume appeared about a year ago, and now the third and last has seen the light of day. It may be explained, briefly, that nearly all the many contributors are London surgeons, and most of them young men; that in the

general plan of the book it is taken for granted that the reader has a fair knowledge of surgery as it is set forth in the classical text-books, but that he wishes to be put in touch with the new classifications, new methods of diagnosis, and new methods of treatment. It is far more than a text-book of operative surgery. The first volume deals with anæsthesia, diseases of the abdomen and rectum, X-ray diagnosis, and radium. The second volume includes the bulk of ordinary surgery and gynæcology. In the third, diseases of the eye, ear, nose, throat, œsophagus, mouth, and teeth find a place, together with obstetrics, venereal diseases, plastic surgery, orthopædics, and a few general surgical subjects such as diseases of the cardio-vascular and lymphatic systems, and useful articles on small special topics such as blood-drip transfusion, cisternal puncture, pilonidal sinus, burns, and treatment by snake venom. The book is of very great value ; we know nothing else that fulfils the same purpose. It is excellently illustrated, and the print is unusually large and clear. Where all is so good, it is difficult to single out any part for special praise, but we personally read with great interest and profit the section on the Urinary System and Male Genital Organs.

Physical Signs in Clinical Surgery. By HAMILTON BAILEY, F.R.C.S. Sixth Edition. Pp. xii., 284. Illustrated. Bristol : John Wright & Sons, Ltd. 1937. Price 21s.—This is a wonderful little book, and we are not at all surprised that six editions have been called for in ten years. It very rightly directs attention to the personal examination of the patient by the doctor or medical student. In these days when there is such a tendency for the clinician to shirk his work and throw the responsibility for a diagnosis on to the pathologist, or the hæmatologist, or the radiologist, or the bio-chemist, this is a very salutary admonition. Though mainly written for the medical student, the book is vastly instructive for the medical practitioner. For one thing, it teaches how to examine the patients without hurting them. For instance, we are told, in the case of a child with suspected intussusception, to begin by palpating the abdomen, with a warm hand, under the bed-clothes. Some of the diagnostic signs will probably be fresh to the professional surgeon also. To locate an arterial embolus, we are told to occlude the limb high up with a band, and listen with a stethoscope over the artery ; when the band is let go, the booming sound can be heard down to the embolus, where it stops suddenly. Or, draw the prongs of a

fork down the limb; vasomotor stripes appear, which fade at the level where the circulation is interrupted. To distinguish between intussusception and Henoch's Purpura, apply a band for three minutes to a limb fairly tightly; petechiae will appear below it. Valuable as the text is, the main value of the book lies in its 358 illustrations, all good, and some very good indeed. Merely to glance through these is a valuable education. If it were not for them, one might think a guinea a large price for a book on so limited a subject, but it is money well spent. To learn to diagnose is well worth our money and our pains.

The Principles and Practice of Rectal Surgery. By W. B. GABRIEL, M.S., F.R.C.S. Second Edition. Pp. ix., 363, Illustrated. London: H. K. Lewis & Co. Ltd. 1937. Price 28s.—The second edition of this book, some five years after the first, shows many useful additions to the first volume, as well as thorough revision. The work throughout conveys the principles associated with the St. Mark's Hospital School, and this alone would stamp its authoritativeness. Mr. Gabriel has written in a very clear and reasoned manner on all the common rectal affections. He gives full details of all his methods, and, even better, full illustrations wherever feasible. The book contains over 170 illustrations in its 350 pages of text. This makes the book an excellent manual for the general practitioner who is prepared to undertake some minor rectal surgery, as well as a reliable book of reference for the practising surgeon, and a concise account for the student. There is, indeed, little to criticize, and this review must content itself with a description of the work. A chapter on surgical anatomy, written in conjunction with Mr. O. V. Lloyd-Davies, has been added to the old edition, and the illustrations here are extremely clear. This is followed by a chapter, invaluable to the practitioner, on rectal diagnosis, which includes clear accounts of proctoscopy and sigmoidoscopy as well as case-taking and record-keeping. An account of the Principles of Rectal Surgery with a description of pre- and post-operative treatment and anæsthesia conclude the general opening chapters. The rest of the book is devoted to specific lesions of the rectum and anus. While the treatment is somewhat dogmatic, it gives the impression of being the methods used regularly and successfully by one man. This is, however, preferable to a long and incoherent account of many methods where the reader is left to discriminate between

them. One is somewhat surprised to find no account of the abdomino-perineal method of excision of the rectum. One also wishes that a description of the prone position for excision of the rectum had been given. This is surely much simpler that the lateral position. However, these are molehills and Mr. Gabriel is to be congratulated on his useful book.

The Abdominal Surgery of Children. By Sir L. BARRINGTON-WARD, K.C.V.O., Ch.M., F.R.C.S. Second Edition. Pp. xv., 333. Illustrated. London: Oxford University Press (Humphrey Milford). 1937. Price 25s.—The professi is greatly enriched when one of its members shares his singular knowledge, skill and experience on such an important topic with his lesser brethren. In this work Sir Lancelot Barrington-Ward has presented to us fully and lucidly all his ripe knowledge on the comparatively specialized field of abdominal surgery in the child. After seeing him operate and reading this book, one feels strongly that he is the best qualified among us to set forth standard surgical teaching on this subject. The book embraces the whole realm of abdominal surgery and deals fully with etiology as well as diagnosis and treatment. While mentioning what is worthy in the newer views, he is essentially cautious and sound in handling problems. He makes plain the simple truth that the mortality of appendicitis, of hypertrophic pyloric stenosis, and of intussusception can be controlled best by the early diagnosis of the general practitioner and prompt surgery. Hernia and its treatment is admirably discussed and the multitude of congenital defects of the intestine are arrayed clearly. Terminal ileitis and subphrenic abscess deserve description in the next edition. It is an invaluable book of reference for surgeons who meet but occasionally with rarities and a most admirable text-book for all who wish to learn about surgical disease in children.

Text-book of Gastroscopy. By N. HENNING, translated by H. W. RODGERS, F.R.C.S. Pp. xii., 86. Illustrated. London: Oxford University Press (Humphrey Milford). 1937. Price 7s. 6d.—It is only within the last few years that gastroscopy has been at all extensively practised in England. Rigid instruments are not easily introduced into the stomach; they afford but a limited view of its interior; while lack of gentleness and skill on the part of the operator or a struggle on that of the patient may easily cause serious damage to the stomach or œsophagus. Since the invention of the Wolf-Schindler flexible gastroscope, however, gastroscopy has been increasingly

employed at many of our bigger medical centres. The passage of this instrument presents little more difficulty than does that of a stomach tube, and the soft rubber ball or sponge in which it terminates efficiently safeguards the patient from injury. If the stomach is empty a good view can usually be obtained so that patients are best examined after a night's fast. A preliminary washout is *not* to be recommended, as it is not easy to empty the stomach completely and the appearances of the mucous membrane after a wash are apt to be deceptive. The lesser curvature and part of the cardiac end of the stomach are not readily visible because the instrument lies in close contact with these parts of the wall of the viscus, but Dr. Rogers has invented a modification of the standard instrument whereby a rubber bag can be inflated just above the objective, thus pushing it away from the mucous membrane, and so bringing the latter into focus. With a little experience the fundus, greater curvature, pylorus, and antrum can generally be satisfactorily inspected, but much more extensive practice is required before the picture can be correctly interpreted. Gastroscopy is of great value as an additional method of diagnosis in those cases in which a test meal and radiography still leave one in doubt. By this means the reviewer has been able to determine definitely the absence of malignant changes in a doubtful ulcer, for instance, thus saving the patient from an exploratory operation. Gastroscopy has already added greatly to our knowledge of the appearances of gastritis in its various forms, and it is to be hoped that increasing familiarity with this condition may aid us in its prevention and cure. As carcinoma is commonly preceded by gastritis one can only trust that we may eventually see some diminution of this dire disease. The present volume, which is one of the well-known *Oxford Medical Publications*, is simply written, well printed and indexed and contains numerous illustrations, many of them in colour. It should prove an excellent introduction to the subject of gastroscopy.

The Bed Bug. British Museum (Natural History) Economic Series, No. 5. By A. W. McKENNY-HUGHES. Fourth Edition. Pp. iv., 19. Illustrated. 1937. Price 6d.—This is the fourth edition, and has been entirely rewritten in the light of present-day experience. The life-history, habits and means of dissemination are fully and completely described. The methods of control which are important in a pamphlet of this character are the most modern. While fumigation by HCN is most effective, the author strongly emphasizes the danger of

this process if not carried out with extreme care and in charge of skilled operators. The subject-matter has been reduced without in any way detracting from its usefulness as an authoritative treatise on the subject. The lack of an index is not a material omission as the hand-book maintains a connected sequence. The previous excellent illustrations are reproduced with the addition of a fine coloured one. It can be recommended as an easily readable informative pamphlet of special interest to medical officers of health, sanitary inspectors and others whose business requires knowledge of the best means for the eradication of this pest.

Clinical Contraception. By G. M. Cox, M.B., B.S. Second Edition. Pp. ix., 196. Illustrated. London: William Heinemann Ltd. 1937. Price 7s. 6d.—The publication of a second edition of this text-book within so few years of the appearance of the first edition is a guarantee that the practitioner will find in it practical and up-to-date information on modern contraceptive methods. There is no doubt that a wider knowledge of the clinical uses of chemical contraceptives and of mechanical appliances for birth control is now expected of the medical profession, and there are few British medical authors better qualified through practical experience than Dr. Cox to supply the information which is required by doctors in general practice. The physiological and medical aspects of the subject are dealt with in a scientific manner, and the pros and cons of the different methods are fully set forth. Chapter III is devoted to a comparison of the different values of chemical contraceptives, and to the methods of their application; reference is also made to recent research work on the spermicidal value of the chemical contraceptives in most general use. This chapter contains information of particular value to the practitioner. In the final chapters the various contraceptive methods are compared, and useful information is given about the powers of Local Authorities in England and Wales to provide facilities for advice and instruction in methods of contraception. This book can be recommended to those seeking information on this subject.

The Highveld Climate.—This small pamphlet, issued by the Publicity Bureau of the Union of South Africa, supplies a series of meteorological data such as rainfall, annual sunshine hours, temperatures, humidity and other climatic details, which pertain to the high plateau constituting the interior of the

more northern portions of South Africa. These observations make interesting reading and supply a rational basis for the claims of this area as a health resort.

First Aid to the Injured and Sick. Edited by F. C. NICHOLS, M.C., M.B., Ch.B., M.R.C.S., L.R.C.P., L.D.S. Sixteenth Edition. Pp. xii., 318. Bristol: John Wright & Sons, Ltd. 1937. Price 2s. 6d. net.—The sixteenth edition of Warwick and Tunstall's *First Aid* differs from the previous editions in containing a full and up-to-date account of gas poisoning in warfare. The particular points which have been expanded or added since the fifteenth edition are: fuller details of treatment, new sections on detection of various types of gas, new sections on protection of houses and buildings (admirably illustrated) and on protection of the body from blistering gases and liquids. There is also a new and adequate account of Air Raid Precaution Organizations, with full description of First Aid and Decontamination Posts. The value of this favourite manual of first aid is greatly increased by these additions.

Editorial Notes

National Health Campaign.

At a well-attended meeting held in the Colston Hall on Thursday, December 16th, Sir Kingsley Wood, Minister of Health, and Mr. Arthur Greenwood, who held the same office from 1929 to 1931, spoke in support of the National Health Campaign. The aim of this campaign as set forth by the principal speakers is to produce a physically fitter nation by inducing every individual to do all in their own power to make him or herself healthier, aided by the medical profession and the many State, municipal and voluntary agencies.

Speeches did not occupy the whole evening. A children's choir, directed by Mr. G. F. Lewis, sang surprisingly well: not perhaps attaining to the sweetness and precision of some Welsh children's choirs, but none the less showing great musical ability and life. There were also excellent "Keep Fit" displays by the Bristol Women Teachers' and the Bristol Schoolmasters' Physical Training Associations.

Sir Kingsley Wood spoke of the Health Campaign as a fight for better health and better conditions, in which we should need to use the whole armoury which modern science and knowledge have given us, better housing, improved nutrition, more care for the mothers and the children, more open spaces and recreation grounds and opportunities for exercise and physical training. But he was careful to explain that his idea

of improving the physique of the nation was not the setting up of a course of physical jerks. He invited the co-operation of the general practitioners and of the voluntary institutions with the State and municipal services, paying several compliments to Bristol's record in social and medical progress. He referred appreciatively to the recent amalgamation of the Royal Infirmary and General Hospital, expressing his hope that this would facilitate still closer co-operation between the municipal hospitals, the voluntary hospitals and the University.

Mr. Greenwood, who spoke immediately after Sir Kingsley Wood, was untrammelled by the responsibilities of office and came nearer to the core of the matter. "These physical displays," he said, "necessary as they may be, are no alternative to a proper system of social services. . . . To make this a great nation you must see that there is no under-nourishment, and no social conditions which are injurious to healthy and inspiring growth." This latter phrase of Mr. Greenwood's sums up all that need be said in this present campaign. His words must be implemented by action. If we secure good food, good fresh air and good rest for our children they will dance and sing without orders from higher authority.

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New Medical Journals.

Two new medical journals have made their first appearance this autumn. The *Irish Medical Journal* is the official organ of the Irish Medical Union, the association of medical practitioners in Eire (formerly known as the Irish Free State), which is the counterpart of the British Medical Association. This weekly journal is devoted to recording the

proceedings of the Medical Union, and articles of medical, medico-political and general interest. It is modelled on the journals of other similar associations such as the American, Canadian, Australian and Indian. An official publication of this nature is essential to the life and activity of the Irish Medical Union. We have no doubt that the *Irish Medical Journal* will fully maintain the long tradition of first-rate medical journalism of which Ireland may well be proud. *Medicine of To-day and To-morrow* voices the opinions and views of the Socialist Medical Association. In the Editorial of the first number it is claimed that new ground is being broken. The journal is intended to help in replanning our medical system. Mr. Attlee, Leader of the Parliamentary Labour Party, sending his greetings to the new venture, says "it will be a great advantage to have a journal which will show the developments of planned medicine all over the world." In the first number there are two important articles: "The Municipal Hospitals of London," by Somerville Hastings, M.D., F.R.C.S., and "The Course of the Malnutrition Controversy," by Professor Le Gros Clark. *Medicine of To-day and To-morrow* is not designed solely for medical readers, and does not appear to compete with the *Lancet* and *British Medical Journal* in publishing scientific or clinical papers. If it continues as it has begun this journal, which is published monthly, will always provide interesting and informing reading. Even if some doubts may be felt whether medicine will benefit from the inclusion of politics, there can be no doubt that politics may be improved by an infusion of scientific methods. Perhaps *Medicine of To-day and To-morrow* will serve to blunt some of the asperities of political controversy.

Revival of Territorial Medical Units in Bristol.

SHORTLY after the War two medical units of the Territorial Army in Bristol were disbanded in the pursuit of a plan of economy and a hope that wars and rumours of wars would cease. Unfortunately that hope has been disappointed and rearmament is seen to be imperative. The War Office has ordered, and the Treasury has sanctioned, the formation of a Field Ambulance and a General Hospital in Bristol. The General Hospital will be revived under its former title of the Second Southern General Hospital, with Lieut.-Colonel R. C. Clarke, O.B.E., as Commanding Officer. His record begins in the days of the Volunteers, when he enlisted as a private in the Bristol Rifles (1st V.B. Gloucester Regiment); soon after the Territorial Force was formed Colonel Clarke received his commission as a subaltern in the same battalion (known as the 4th Gloucesters). Before the War he had transferred to the R.A.M.C., and remained with the battalion as its Medical Officer, proceeding to France in 1915 with the 48th (South Midland Division). During the War Captain Clarke (as he then was) was posted to No. 19 C.C.S. in charge of the Medical Division, and acted on many occasions as Consulting Physician to the Third Army. His war services were rewarded by the O.B.E. (Military Division).

On demobilization he returned to his former appointment of Medical Officer to the 4th Gloucesters, which he has held until gazetted to raise and command the Second Southern General Hospital. Colonel Clarke is by a great number of years the senior member of the 48th Division, and his appointment to this important command is a matter of general gratification.

The Field Ambulance is to be numbered the 144th

in the Territorial Army. This was the number which belonged to the 3rd South Midland Field Ambulance in the War, but it was by the latter title it was generally known. The new field ambulance, like its predecessor, is part of the 144th Brigade in the 48th Division. Lieut.-Colonel W. A. Jackman, F.R.C.S., has been gazetted to take command. He served as a combatant officer with the 6th Gloucesters in the early part of the War, then he was returned to his medical studies and, after qualifying, joined the R.A.M.C. (T.F.). As an R.A.M.C. officer he saw service in various theatres of the War.

After the War he was again attached to the 6th Gloucesters as their Medical Officer, a post which he now vacates on promotion.

Those of us who recall the enthusiastic support which was given to Colonels Paul Bush and Arthur Prichard when these two units were originally raised in 1908 will wish that even greater success will attend the efforts of their successors. We hope, too, that the Drum-Major's staff, presented by the Bristol Medico-Chirurgical Society to the 3rd South Midland Field Ambulance on 9th July, 1909, will be seen at the head of the band once more, if bands are included in the establishment of field ambulances in these days. An interesting account of the early days of the 3rd South Midland Field Ambulance, written for this *Journal* by Lieut.-Colonel A. W. Prichard, was published in Vol. XXXI. (1913), p. 159.

Meetings of Societies

THE Annual Meeting of the Society was held in the Physiological Lecture Theatre of the University on Wednesday, 13th October, at 8.30 p.m.

Dr. Richard Clarke was in the Chair, and eighty-five members were present.

The minutes of the previous meeting were read and confirmed.

The President then resigned his Chair to his successor, Mr. C. A. Moore. A vote of thanks to the retiring President was proposed by Dr. Symes, and seconded by Mr. Chitty.

The President gave his inaugural address on **"Medical Defence."** A vote of thanks to the President for his address was proposed by Mr. Walters, and seconded by Dr. Orr-Ewing.

The annual reports of the Hon. Secretary, the Hon. Treasurer, and the Hon. Editor of the *Journal* were read and adopted by the Society, and Mr. R. V. Cooke and Mr. A. E. Iles were re-elected as Hon. Secretary and Hon. Treasurer respectively.

Dr. Nixon proposed and Dr. Richard Clarke seconded that the election of Hon. Medical Librarian should be postponed, and that the Society should elect the Professors of Medicine, Surgery and Gynæcology to act in the capacity of Librarian for the time being. This was adopted.

Dr. Elwin Harris proposed and Dr. Cookson seconded that the following nine members should serve on the Committee: Dr. Carleton, Dr. Corfield, Dr. Richard Clarke, Dr. Taylor, Dr. Martin, Dr. Milling, Mr. Wood, Mr. Shepherd and Mr. Jackman, and the following three members were asked to serve on the University Library Sub-Committee: Professor Perry, Professor Rendle Short, and Professor Drew Smythe.

The Second Meeting of the Session was held on Wednesday, 10th November, at 8.30 p.m. in the Physiological Lecture Theatre of the University.

BRISTOL MEDICO-CHIRURGICAL SOCIETY.

INCOME AND EXPENDITURE ACCOUNT for the year ended 30th September, 1937.

INCOME.	£ s. d.	£ s. d.
Members' Subscriptions ..	227 6 6	
Do., outstanding for 1936–1937	29 8 0	
		256 14 6
Interest on Bank Deposits		2 11 0
Interest on £500 4 per cent. Consolidated Stock, less tax		15 2 6
		274 8 0
Deficit for the year		65 3 5
		£339 11 5

EXPENDITURE.	£ s. d.	£ s. d.
Grant to *The Bristol Medico-Chirurgical Journal*		261 0 0
Librarian—Honorarium		15 0 0
Miscellaneous Expenses—	£ s. d.	
Goodway–Refreshments	16 16 0	
Postages and Sundries	13 2 2	
Printing and Stationery	10 7 6	
Audit Fee	2 2 0	
Lantern and Cinematograph at Meetings ..	4 4 0	
Electric Pointer	9 10 4	
University Marshal ..	1 0 0	
Lewis's Medical and Scientific Library—		
£ s. d.		
Subscription 5 10 0		
Postages .. 0 19 5		
	6 9 5	
		63 11 5
		£339 11 5

BALANCE SHEET as at 30th September, 1937.

LIABILITIES AND CAPITAL.	£ s. d.	£ s. d.
Sundry Creditors		7 2 3
Capital as at 30th Sept., 1936	1,132 17 3	
Less Deficit for the year	65 3 5	
		1,067 13 10
		£1,074 16 1

ASSETS.	£ s. d.	£ s. d.
Cash at Bank—		
Current Account	434 5 9	
Deposit Account	173 13 4	
		607 19 1
£500 4 per cent. Consolidated Stock at cost		437 9 0
Sundry Debtors—		
Members' Subscriptions for 1936-1937 outstanding ..		29 8 0
		£1,074 16 1

Audited and found correct,
H. E. KEELER,
Chartered Accountant,
Auditor.

16–18 CLARE STREET, BRISTOL 1.
11th October, 1937.

Y

Mr. C. A. Moore was in the Chair, and sixty-seven members present.

The minutes of the previous meeting were read and confirmed.

Dr. Barbour gave an address on **"Child Guidance."**

The third meeting of the Session was held at 8.30 p.m. on Wednesday, 8th December, in the Physiology Lecture Theatre of the University.

Mr. C. A. Moore was in the Chair, and sixty-one members were present.

The minutes of the previous meeting were read and confirmed.

Mr. John Wright opened a discussion on **"The Nature and Treatment of Giddiness."** He was followed by Dr. Carleton, Mr. E. Watson-Williams, Mr. Scarff and Dr. P. Watson-Williams.

℞ Galenicals ℞

Hon. President: Professor T. B. Davie, M.R.C.P.

Hon. Secretary: D. C. Bodenham,
Greystoke, South Dene, Coombe Lane, Bristol.

DURING 1937 the Society was honoured by the visits of many notable speakers, including Sir Humphry Rolleston, G.C.V.O., K.C.B., who gave a lecture entitled **"Medical Eponym"**; J. R. Rees, M.D., a lecture on **"Psychology"**; Sir Henry Dale, C.B.E., M.D., F.R.C.P., a lecture on **"The History of Knowledge concerning Ergot and its action."** Professor Davie, M.R.C.P., exhibited a film by the late R. G. Canti, **"The Culture of Living Tissue."**

A most successful trip to Germany was organized during the summer, a full account of which appeared in *The Black Bag*.

The Society has now over two hundred members, and the question of affiliation to the Bristol University Union is in hand.

The Medical Library of the University of Bristol

WITH WHICH IS INCORPORATED

The Library of the Bristol Medico-Chirurgical Society.

The following donations have been received since the publication of the list in October, 1937.

December, 1937.

The Hunterian Society (1)	1 volume.
Army Medical Library, Washington, U.S.A. (2)	2 volumes.
Professor E. W. Hey Groves (3)	14 ,,
Dr. F. S. Hunter (4)	1 volume.
Mrs. Lilian Lindsay (5)	1 ,,
Michell Clarke Fund (6)	1 ,,
Professor J. A. Nixon (7)	2 volumes.
Royal College of Surgeons (8)	1 volume.

Unbound periodicals have also been received from Professor E. W. Hey Groves, Professor C. Bruce Perry, Dr. J. O. Symes.

THE ONE HUNDRED AND SIXTY-FIRST LIST OF BOOKS.

The figures in round brackets refer to the figures after the names of the donors. The books to which no such figures have been attached have either been bought from the Library Fund or received through the *Journal*.

Army Medical Library, Washington, D.C. One Hundredth Anniversary, 1936	(2)		1937
Bailey, Hamilton .. *Physical Signs in Clinical Surgery*		6th Ed.	1937
Bernard, Claude .. *Introduccio a l'estudi de la Medicina Experimentale*	(7)		1937
Browning, Ethel .. *Toxicity of Industrial Organic Solvents. (Industrial Health Research Board Report No. 80)*	(7)		1937
Clay, Henry H. .. .. *The Sanitary Inspector's Handbook*		3rd Ed.	1937
Colyer, Sir Frank .. *Variations and Diseases of the Teeth of Animals*	(5)		1936

Cox, Gladys M. .. *Clinical Contraception* .. .. .. 2nd Ed. 1937
Crawford, A. Muir .. *Materia Medica for Nurses* .. .. 4th Ed. 1937
Cruickshank, D. B. .. *Tuberculosis, Cancer and Zinc* .. .. (4) 1937
Duke-Elder, Sir W. Stewart *Textbook of Ophthalmology* .. Vol. II (6) 1938
East, Terence .. .. *Failure of the Heart and Circulation* 1937
Gabriel, W. B. .. .. *Principles and Practice of Rectal Surgery* 2nd Ed. 1937
Glaister, J., and Brash, J. C. *Medico-Legal Aspects of the Ruxton Case* 1937
Gould, Sir A. P. .. *Elements of Surgical Diagnosis* 8th Ed. (3) 1937
Griffin, F. W. W. .. *Scientific Basis of Physical Education* 1937
Haldin-Davis, H. .. *Skin Diseases in General Practice* 3rd Ed. 1937
Hewer, Evelyn E. .. *Textbook of Histology for Medical Students* (3) 1937
Index Catalogue of the Surgeon General's Office, 4th Series, Vol. II. (2) 1937
Kappis (Max) .. .. *Allgemeine und spezielle chirurgische Diagnostik* (3) 1937
League of Nations. *Final Report of the Mixed Committee on the Relation of Nutrition to Health, Agriculture and Economic Policy* 1937
Lewis, Sir Thomas .. *Diseases of the Heart* .. .. .. 2nd Ed. 1937
Luhmann, Kurt .. *Die Technik der Operation der Gaumenspalten und Gaumenlippenspalten* .. .. .. (3) 1937
McLaggan, J. Douglas *Diseases of the Ear, Nose and Throat* 1937
Maingot, Rodney (ed.) *Post-graduate Surgery.* Vol. III. .. .. (3) 1937
Ombredanne, J., and Mathieu, P. *Traité de chirurgie orthopédique* 5 Vols. .. .. (3) 1937
Price, Frederick (ed.) *Textbook of the Practice of Medicine* 5th Ed. 1937 (Also India paper copy.)
Rose and Carless .. *Manual of Surgery.* 15th Ed. by Wakeley and Hunter, 2 Vols. .. .. (3) 1937
Shands, A. R. .. .. *Handbook of Orthopædic Surgery* .. .. (3) 1937
Souttar, H. S. .. .. *The Art of Surgery* .. .. .. 3rd Ed. (3) 1937
Steen, Robert Elsworth *Infants in Health and Sickness* 1937
Todd, A. T. .. .. *Treatment of some Chronic and 'Incurable' Diseases* 1937
Treatment in General Practice. Vol. I. 1937
Voronoff, Serge .. *Results followed up for twenty years after grafting of the Thyroid, in cases of Myxedematous Cretinism* 1937
Williams, Leonard .. *Minor Maladies* .. .. 7th Ed. 1937
Wilton, Ake .. .. *Tissue Reactions in Bone and Dentine* .. (3) 1937

TRANSACTIONS, REPORTS, JOURNALS, ETC.

Calendar of the Royal College of Surgeons, 1937 .. .. .. (8) 1937
The Medical Directory, 1938 1938
Quarterly Cumulative Index Medicus. Vol. 21 1937
Saint Bartholomew's Hospital Reports. Vol. LXX. 1937
Smithsonian Institution Annual Report, 1936 1937
Transactions of the Hunterian Society. Vol. I. 1936–37 .. (1) 1937
Transactions of the Ophthalmological Society of the United Kingdom. Vol. LVII, Part I. 1937

Publications Received

From THE TRUSTEES OF THE BRITISH MUSEUM:

The Bed Bug. (British Museum (Natural History) Economic Series No. 5.) By A. W. MCKENNY HUGHES, D.I.C. Price 6d.

From HANOVIA LTD., BATH ROAD, CIPPENHAM, SLOUGH:

Pre-eminent in the Relief of Pain.

From HOGARTH PRESS:

Diet and High Blood Pressure. By I. HARRIS. Price 10s. 6d.

From H. K. LEWIS & CO. LTD.:

The Sanitary Inspector's Handbook. By HENRY H. CLAY, F.R.San.I., F.I.S.E. 3rd Edition. Price 16s. 6d.

The Principles and Practice of Rectal Surgery. By WILLIAM B. GABRIEL, M.S.Lond., F.R.C.S. 2nd Edition. Price 28s.

Chronic Streptococcal Infection as a Disease. By J. D. HINDLEY-SMITH, M.A., M.R.C.S., L.R.C.P. Price 3s. 6d.

Diseases of the Nose, Throat and Ear. By J. DOUGLAS MCLAGGAN, M.A., M.B., F.R.C.S. Eng. and Edin. Price 15s.

From OXFORD UNIVERSITY PRESS:

Textbook of Gastroscopy. By NORBERT HENNING. Translated by HAROLD W. RODGERS. Price 7s. 6d.

From P.E.P. (POLITICAL AND ECONOMIC PLANNING):

Report on the British Health Services. Price 7s. 6d.

From SOCIÉTÉ DE PATHOLOGIE COMPARÉE, PARIS:

Results followed up for twenty years after Grafting of the Thyroid in cases of Myxœdematous Cretinism. By SERGE VORONOFF. (Reprinted from *Bulletin de la Soc. de Path. Comparée*, No. 492.)

From JOHN WRIGHT & SONS LTD.:

Physical Signs in Clinical Surgery. By HAMILTON BAILEY, F.R.C.S. 6th Edition. Price 21s.

British Journal of Surgery. Vol. XXV. No. 98. (Oct., 1937.) Price 12s. 6d.

First Aid to the Injured and Sick. By WARWICK and TUNSTALL. Edited by F. C. NICHOLS, M.C. Price 2s. 6d.

Local Medical Notes

His Majesty the King has conferred the honour of knighthood on Dr. William George Savage, M.D., D.P.H., late Medical Officer of Health for Somerset.

EXAMINATION RESULTS.

University of Bristol.—Students of the University have recently passed the following examinations :—

M.B., CH.B.—*Second Examination* (*Section II.*). *Pass :* R. T. Davies.

M.B., CH.B.—*Final Examination* (*Section I.*). *Pass :* W. H. G. Elliott, K. A. Hall.

M.B., CH.B.—*Final Examination* (*Section II.*). *Pass :* R. L. J. Derham, H. D. T. Gawn, M. E. M. Herford, F. J. W. Hooper, G. L. Page (with Distinction in Public Health), Anna H. Silberstein. *In Group II.* (*completing Examination*) : P. N. Heron, P. K. Jenkins.

B.D.S.—*Second Examination. Pass : In Dental Anatomy* (*completing Examination*) : F. C. Baker, D. C. Bodenham.

B.D.S.—*Third Examination. Pass : In Dental Mechanics* (*completing Examination*) : A. A. Grant (with Distinction) G. R. Styles. *In Dental Materia Medica* (*completing Examination*) : G. H. Bell, J. E. H. Bell, J. F. Blenkinsop (with Distinction).

L.D.S.—*Final Examination. Pass :* H. B. Harding, J. C. F. Rolls.

L.D.S.—*Second Examination. Pass : In Anatomy and Physiology* (*completing Examination*) : L. B. Howell, P. Le Masurier, O. H. Minton. *In Dental Anatomy* (*completing Examination*) : J. C. Jowett, R. B. Stiles. *In Anatomy and Physiology only :* B. N. Neilson.

L.D.S.—*Third Examination. Pass : In Dental Mechanics* (*completing Examination*) : F. W. Clift, K. A. Gordon-Ralph, G. H. Hudson, E. L. Manton, Mary E. Thomas, May A. Trump, L. N. Weale, H. D. Williams, E. S. Wolfson. *In Dental Mechanics only :* J. W. S. Jenkins.

University of Oxford.—M.A. (by incorporation)—G. C. Williams, M.A. (Cantab.), M.R.C.S., L.R.C.P., D.P.H. (Brist.).

Conjoint Board. — L.R.C.P. M.R.C.S. — *Pass : In Physiology :* B. C. E. Aldous. *In Pharmacology and Materia Medica :* E. A. Griffiths, E. B. Hughes, J. I. Williams. *In Medicine :* R. L. J. S. Derham,* F. D. Mowat,* K. C. P. Smith,* Mabel W. N. Tribe.* *In Midwifery :* J. H. Bulleid, Margaret E. M. Slater. *In Pathology :* Mabel L. Glenny. *In Surgery :* K. G. Bergin.*

* Qualified.

Index

Adams, A. W.—Spinal anæsthesia, 143.
Altitude, Therapeutic value of.—B. Hudson, 35.
Amalgamation of B.R.I. and B.G.H., 78.
Anæsthesia, Spinal.—A. W. Adams, 143.
Appointments :
F. G. Bergin, G. B. Bush and S. B. Adams.—B.R.I. and B.G.H. Radiological Department, 189.
A. W. Falconer.—Vice-Chancellor, Cape Town University, 238.
A. G. Palin.—Assistant Surgeon, Bristol Eye Hospital, 97.
Arrowsmith-Brown, J. A. — Obituary, 183.

Barbour, R. F.—Child guidance, 261.
Beddoes, Dr., and the Physical Fitness Campaign, 232.
Berry, R. J. A.—The Burden Mental Research Trust, 201.
Bodman, F.—Rôle of central nervous system in disease, 41.
Book Reviews, 64, 171, 227, 301.
Bristol Medical Dramatic Club, 98.
Bristol Royal Infirmary.—E. Watson-Williams, 167.
Bristol Royal Infirmary Bicentenary, 80, 190, 287.
Bristol Royal Infirmary and Bristol General Hospital Amalgamation, 78.
Elections to United Honorary Staffs, 182.
Burden Mental Research Trust.—R. J. A. Berry, 201.

Cardiac ischæmia.—L. O'Shaughnessy, 109.
Carey Coombs Memorial Lecture.—L. O'Shaughnessy, 109.
Casualty Clearing Station.—R. C. Clarke, 1.
Central Health Clinic, 231.
Central nervous system in disease.—F. Bodman, 41.
Child guidance.—R. F. Barbour, 261.
Clarke, R. C.—Evolution of a casualty clearing station, 1.
Colston Medical Research Fellowship, 82.

Drew-Smythe, H. J. — Prontosil in obstetrics, 217.

Examination Results, 96, 188, 237, 323.

Galenicals, 320.
Green-Armytage, V. B.—The debt of Western medicine to the East, 239.

Ham Green Hospital extension.—W. W. Jameson, 221.
Hudson, B.—Therapeutic value of altitude, 35.

Jameson, W. W.—Ham Green Hospital extensions, 221.

Library, 92, 185, 234, 321.

Macloghlin Scholarship.—D. S. Short, 190.

National Association for the Prevention of Tuberculosis. — Conference in Bristol, 181.
National Health Campaign, 313.
Nervous system in disease.—F. Bodman, 41.
Nixon, J. A.—Nutrition and tuberculosis, 191.
Nutrition and tuberculosis.—J. A. Nixon, 191.

Obituaries :—
J. A. Arrowsmith-Brown, 183.
George Parker, 82.
Arthur Walbank, 90.

Obstetrics, Prontosil in.—H. J. Drew-Smythe, 217.
O'Shaughnessy, L.—Cardiac ischæmia, 109.

Parker, George.—Obituary, 82.
Physical Fitness Campaign, Dr. Beddoes and.—232.
Poynton, F. J.—Research in medicine, 127.
Presidential Address.—R. C. Clarke, 1.
Prontosil in obstetrics.—H. J. Drew-Smythe, 217.
Prostate, Enlarged.—C. F. Walters, 21.
Publications Received, 94, 187, 236, 323.

Royal College of Surgeons of England—Macloghlin Scholarship.—D. S. Short, 190.

Spinal anæsthesia.—A. W. Adams, 143.
Sulphanilamide in treatment. — E. Watson-Williams, 209.

Territorial Medical Units in Bristol, 316.
Throat, A lump in the.—E. Watson-Williams, 279.
Tuberculosis Conference in Bristol, 180.
Tuberculosis, Nutrition and.—J. A. Nixon, 191.
Twenty-sixth Long Fox Memorial Lecture, 239.

U.S.S.R., Recent experimental work in.—F. Bodman, 41.

Walbank, Arthur.—Obituary, 90.
Walters, C. F.—Enlarged prostate, 21.
Watson-Williams, E.—How the B.R.I. has watched the world change, 167.
A lump in the throat, 279.
Sulphanilamide in treatment, 209.

ns, 143.
. — E.

col, 316.
Watson-

col, 180.
—J. A.

lemorial

l work

90.
ate, 21.
B.R.I.
ge, 167.

209.